Travels in the Confederation

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Travels in the Confederation

[1783–1784]

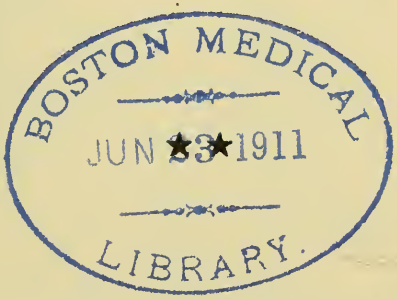
From the German of

JOHANN DAVID SCHOEPF

Translated and Edited

by

ALFRED J. MORRISON



Pennsylvania, Maryland, Virginia, the Carolinas,
East Florida, the Bahamas

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von

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Zweyter Theil.

Erlangen

bey Johann Jacob Palm. 1788.

Preface

WHAT I have already observed in the Preface to the first part, regarding the occasion and the purpose of my journey through North America, I must repeat here. In the circumstances I was unwilling, and unable, to set before myself a complete description of observables in America. Moreover, it should be borne in mind that the journey through Virginia, North and South Carolina, fell in the winter months, unfavorable for investigations in natural history or in œconomical subjects, and there was no alternative. I shall hope, therefore, that the reader will pardon me if I do not gratify his wish for pleasing information on all manner of subjects. I bring these Travels to an end with my arrival in England. The numerous accounts of that kingdom and of other countries touched by me on my journey home would render mine superfluous.

Bayreuth, October, 1788

FRAGMENT
EINES SCHREIBENS
ÜBER
KLIMA UND WITTERUNG
IN
NORDAMERIKA.

—See, Appendix.

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Journey from Philadelphia to Charleston

Pensylvania

IT was towards the end of November when with the purpose of visiting the southern colonies, I left Philadelphia for the second time. I had intended making the journey thence by sea, in one of the regular packet-boats to Charleston; and it was not so much the commonly disagreeable and often tedious voyage at this late season of the year, as the advice of several estimable men and their representations of the manifold advantages, the great pleasure and instruction to be had from a land-journey that determined me in this course. I concluded therefore to take the so-called 'back road' from Philadelphia, by Lancaster and thence along the mountains through Virginia to North Carolina, on which route I could hope to find much that was remarkable. But the roads of those parts getting worse with the approach of winter, I was obliged to leave them and travel along the coast. And unfortunately, at this dead season, I did not find the hoped-for compensation for the long way which, in the spring or the summer, must have afforded at every step useful and pleasant entertainment.

Going from Philadelphia one passes the Schuylkill, at the middle ferry, by a floating bridge consisting of great logs joined together by cramp-irons. In order that the bridge may rise and fall with the ebb and flow of the water, there have been fixed at suitable distances

stout iron turning-joints in the longitudinal timbers. The banks of this pleasant stream, particularly on the west side, are finely distinguished by steep and bare rock-walls. The rock is granite, but feldspar is for the most part absent. The surface-covering is the common reddish, sandy clay earth; but a few miles farther on the rock is covered merely by a clayey slate, and here and there appeared fragments of a blueish black, dense species of stone, called here 'blue stone.' Having followed for some 11 miles the straight western road to Lancaster, the gradually increasing elevation of the land begins to be noticeable from time to time. But here I turned off from the main road, to the right, passed Gulf-mill at a narrow gap between two high rocks, apparently divided apart by force, and after a few miles came again to the Schuylkill and along it to **Swedes-ford.** There met us many wagons, loaded with lime, the staple of this region. A mountainous tract, containing limestone and marble, extends hither from Whitemarsh, Chesnut-hill, and Plymouth, and these are the nearest places from which Philadelphia may be supplied with lime. The lime-burning here is commonly managed not in walled furnaces but in square pits, sometimes but not always lined with fire-proof stone. In burning the lime, for various reasons dead wood or dry logs are preferred, rather than green, and it is estimated that 15 cords of wood are needed to burn 5-600 bushels of lime. The wood is bought on the stump, and 5 shillings Pensyl. Current (⅔ of a Spanish dollar) the cord is regarded as dear. According to the price of the wood, and the cost of cutting and hauling, a bushel of burnt lime can be sold at 8 to 13 pence Pensylv. Current. Most of it is brought

to the city, but the people of the region use a great deal of it on their lands. Being near a good market, and their lands having long been worked, they find this manner of improving their fields very convenient. Ordinary upland, they find, will not take more than 15-20 bushels to the acre, but their fat clayey low-grounds more than twice that much.

About Swedes-Ford there are very considerable marble-quarries. The limestone hills just now mentioned are on the east side of the river, and close by the bank break off steep and rough; the western bank on the other hand is low. The total breadth of this limestone tract, which cuts the stream in an eastern and north-eastern direction, is from one to two miles, and maybe more. Most of the marble is got high up in the mountain where it shows itself in thick beds, falling away to the east at an angle of perhaps 80 degrees. These strata resting one upon another almost perpendicularly are very clearly distinguished by divers rifts and clefts as well as by the changed colors. This can scarcely have been their original bearing; rather it is likely that they have suffered a powerful alteration of their bed. This marble is not the finest, does not take the best polish, and scales under the chisel. In color it is chiefly white and grey, diversly mixed.

On the low hills to the west of the river, made up likewise of limestone rock, loose quartz-fragments are found in great quantity, frequently set off with fine crystals. These occur especially on Mr. Rambo's land, which is throughout based on the limestone. This observation, that crystals are very generally if not always found on limestone soil, I have confirmed in many other parts of America.

The Schuylkill is here commonly not so deep but one may ride through; hence, and from some Swedish families who settled the region, comes the name Swedes-Ford. The descendants of those Swedes still live upon the scattered farms of their ancestors. They have a church of their own in the neighborhood, and the pastor of the Swedish congregation at Philadelphia holds service there once in three weeks, but in the English language. These Swedes were never numerous here; separated from their countrymen and going about and marrying with the English and Germans, they have almost lost the use of their mother-tongue, many of them hardly knowing how to express themselves in it, and using the English speech altogether. This would now be the case with most of the Germans in America, were it not for their vastly greater numbers, constantly replenished from Europe, having helped to keep up the language.

Between Swedes-Ford and Valley-Forge there are to be seen many pits for burning lime; but on the surface along that road only common quartz and sandstone. The height, at the foot of which lies Valley-Forge, was overstrewn with a quantity of hard, slatey, sand-stones, in which here and there appeared little blackish points of what seemed to be shorl. The opposite hill consisted almost entirely of a brown rotten iron-ore mixed with mica. This otherwise very insignificant hollow became known to the world from General Washington's keeping his winter-quarters there in 1778. The works and buildings at the forge were burned down during the war. The ore which was smelted and worked here comes from a valley near-by.

The hills, over which the road lay from here, still

seemed to be made up for the most part of a brown iron-mould, or of an earth similar to this. In one of the valleys there was limestone. But this whole region, far around, cannot boast of any particularly fertile soil; but little grain is raised, and there is a lack of meadows, the narrow low-grounds along the Schuylkill excepted, which is the sole good land of the region. But the country is so much the more productive in iron-ore, which has been the occasion of setting up a good many forges and furnaces. The forests are everywhere thin and of young growth; for what with the lack of a systematic forest-economy here, the many iron-works could not but ravage the woods, and to their own hurt. The better land is used for farming, and the worse, where timber is left standing, produces a slow and poor growth. Moreover the game which at one time was very plentiful in this region has in great part been frightened off, and there is little to be seen except a few pheasants (*Tetrao Umbellus & Cupido L.*), partridges (*Tetrao virginianus L.*), squirrels, and hares. Everybody having full liberty to shoot, as much as he can or cares to, the larger game is extirpated in the farmed and settled parts, and has taken a last refuge in the wild mountain country. The people who live in and among these hills seem not to be the most prosperous and their dwellings are not the best. But they are not forgotten in the tax-levies; an ordinary house, e. g., with 100 acres of land, paid this year 20 Pd. Pensylv. Current. The owner, a German, would therefore rather live somewhere else, but he expressed a singular dislike for the famed Kentucky country on the Ohio, ✝ whither several of his friends were trying to persuade him to withdraw. He had heard that in

Kentucky there is no real winter; and where there is no winter, he argued, people must work year in, year out, and that was not his fancy; winter, with a warm stove and sluggish days, being indispensable to his happiness.

Coventry, another forge 15 miles from Valley-Forge, belongs to a Mr. Pott. On the road thither iron-mould is still to be seen, at times soft, at times hard, and divers other species of rock, scaly sand-stones, quartz, and breccia cemented with sand and iron; and a gneissic rock especially. The forge at Coventry stands in a narrow valley, running east and west. There are three hearths and three hammers. The hammers lie parallel with the shaft, the trunnions of which catch the helve at a little distance behind the hammer, and thus raise it with less power.

The bellows are of wood, and consist of two cylindrical casks, fitting closely the one into the other, and moving up and down between four wooden posts. The wind goes first through a leathern conduit, into an iron pipe, and so to the hearth. These simple bellows have the advantage that they may be set up without trouble or expense, need few repairs, and should last well. The best bar-iron is at this time sold here at 38 shillings Pensyl. Current the hundredweight, or about 5 pence the pound. Here, as everywhere, the assertion is made that American iron is in no way inferior to the best European. Mr. Pott, the owner of the forge, was absent, but we were received by his family with particular courtesy and our wants met with an obliging readiness which is too often not the case, even at a dear reckoning, in the so-called public-houses.

Five miles farther, over barren, stony, woody, and

unsettled hills, we came to Warwick Mine-holes, which in this district, are very famous iron-mines. The ore lies here, (as very generally in America), heaped up in hills and shallow beneath the surface-mould. The surface of these hills is an iron-bearing sand; next, there lies a brown ochre-earth with little iron-stones intermixed, beneath which is a bed, of no great depth, of coarse, red-brown ore, commonly soft; farther down, a whiteish clayey stratum, still somewhat mixed with iron-bearing earth. The greatest depth they have reached is no more than 20 feet, a sufficient store being found above. Any knowledge of mining is superfluous here, where there is neither shaft nor gallery to be driven, all work being at the surface or in great, wide trenches or pits.

From here we missed the prescribed road, and came through untravelled woods and hills to the house of a Quaker where we were compelled to stop for some refreshments, which were not denied us; on the other hand, we lent the woman of the house a patient ear, and received a circumstantial account of how her husband during the war had, by a wise use of his post in the Land-Office, got to himself a handsome estate, seven plantations, and could now laugh at the world. This he may do with the more reason, because he made his purchases largely with paper-money, the no-value of which he perceived at the right time, using to his advantage the credulity of his patriotic fellow-countrymen. From this place we aimed to get once more into the regular road to Lancaster, but made another little detour to see **Jones's Mine-holes,** iron-mines very little different from those just mentioned. Brown, sandy, and soft iron-stone lies shallow beneath the surface,

but is very productive; 3000 pounds of ore are said to yield 2000 pounds of iron. Beneath and above the iron-stone there is a bed of grey, soft, clayey earth which is called by the workmen soapstone. The work is carried on as mentioned above. That is to say, they dig here or there deep and wide, open pits, and when these grow inconvenient on account of depth, water, or other circumstances, they begin new ones. A mile from these Holes we found Jones' Tavern, on the main road to Lancaster. The Welsh Mountains here fall in with sundry other ranges, and between there begins, or ends, a considerable limestone valley,* which extends from here, past Lancaster, York &c., to the Potowmack. In these hills rise the Conestoga, French, and Brandywine creeks, which flow in quite different directions. Jones' Tavern stands in a corner of Berks county, where this bounds on Chester county. The land-surveyors, when they were making the boundaries of these two counties some time ago, overlooked a tract of land of perhaps 300 acres, which lies between the two and now belongs to neither. The owner of this land does not fail to take advantage of the oversight, and pays no taxes, (nor did he during the war), it being uncertain which county should tax him. Among these mountains, especially towards Reading, there are many other iron-mines, furnaces, and forges. On the road hither from Philadelphia we saw hardly any living creature, except a few crows, several wood-peckers (*Picus villosus, principalis &c. L.*), a sitta, the snow-

* I mean by this a valley or hollow between mountain-ranges of other rock-species, the valley itself filled with limestone beds. Vid. *Mineralog. Beyträge* &c.

bird (*Emberiza nivalis L.*), and some partridges (*Tetrao virginianus L.*). The weather was warm and pleasant, but all the leaves had long fallen, and only here and there stood a belated aster; all other plants were slumbering.

The road to Lancaster lies through the fore-mentioned limestone valley, a fertile, varied, and well-farmed region. Along the road indeed one sees for the most part sorry cabins, for the better houses of the well-to-do land-owners are all set a little off from the road. This, and the custom of always leaving some timber next the road, brings it about that travellers think they are going through nothing but wilderness, when all around there are plantations and dwellings stuck away in the bush. On this road everybody I met I addressed in German and they all answered me in the same language. Very many Anabaptists live in these parts; good, kind people, and sturdy subjects who here as well as in Germany win the love of their neighbors and the regard of the magistracy.

The limestone of this valley is the same coarse, black-grey stone, as everywhere, and frequently comes to the surface. This, as well as the middle valley and the great limestone valley beyond that, showing fertile soil, it may be asked: Does limestone soil always make fertile land? And in what association? Or is it merely the deeper situation of these valleys that gives them an especial fertility?

The plantations and dwelling-houses in this region being scattered, we passed through but one village, of 40-50 houses and a church, called New Holland, 13 miles this side Lancaster where we arrived in the evening just before a heavy snow-storm. This storm

raged with unusual severity along the coast of North America, and was accompanied by several earthquakes,* plainly felt both at Philadelphia and New York.

On this road I heard much complaining over the burden of the taxes under the new form of government. But if these are high they are not imposed arbitrarily. Not the quantity of the land but its condition, quality, cultivation, and productiveness, with the number of cattle kept, make the standard for the impost. In every Township sworn men are appointed to value property and lay taxes proportionally. The farmer, if he believes himself unjustly assessed, has the liberty of making counter-representations. The system being what it is, there is apparently an unequal distribution of the tax, with regard to the quantity of land owned by one or another. The men who fix the imposts (Assizers), have nothing to do with taking them up; for that purpose Collectors are appointed, who are subject to trouble and bad words enough before they can gather the tax to deliver it to the Receivers for the County. At present the clergy also must pay taxes, if they own property in land, but the one-time custom has been given over of taking a percentage of their incomes, which was a sort of trades-tax.

Lancaster, of all the inland towns of America, is the most considerable numbering already 900 houses and it is hardly 80 years since the place was first established.

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* In the Bay of New York there lay at the time the last British ships ready for the return voyage, and there were not wanting pious souls in America who looked upon the earthquake and the storm as a sign given upon the departure of their enemies.

No stream is near-by which, giving an advantage of trade, might have contributed to the rapid growth of the town; the Susquehannah flows 10 miles to the south, and the little Conestoga is 2 miles to the east. Indeed the town originally was to have been placed on the Susquehannah, and a timber court-house and jail were actually built at Wright's Ferry; but Hamilton, an esteemed lawyer, managed to change the site so that the new town should rise on land belonging to him. His family still owns the ground-rights, which yield at least 1000 Pd. sterling a year. These ground-rents are unequal, according as the several lots were taken up earlier or later, or are situated in one or another part of the town; for those lots secured at the first settlement of the place pay the least, and as the town grew the price was increased. The town is regularly planned; the town-hall standing in the middle, where the two chief streets cross, the good appearance of which is thus greatly damaged. Not more than 50 English families live here, it is said; and thus the English is by no means the prevailing language, but it is the legalized language. The inhabitants carry on farming, crafts, and trade. But their trade is not very considerable, the town lying too near to Philadelphia (73 miles). There is here a handsome Lutheran church, and a Latin school.*

* Lancaster has now a college as well. Extract from a letter from Philadelphia, 1787. "For the behoof of the German "nation, which from one or another prejudice has hitherto "neglected (except at Philadelphia) to join with their Eng- "lish fellow-citizens in any sort of educational establishment, "the Assembly granted in the autumn of 1786 a patent and "10,000 acres of land for the setting-up of a college at Lan-

The most important thing for me at Lancaster was the very agreeable acquaintance which I had the pleasure of making with the pastor of the Lutheran congregation there, (and now Principal of the new college), Mr. **Heinrich Mühlenberg.** This excellent man, through his own diligence, has gained a very considerable knowledge of natural history and is unwearied in the study of the animals, plants, and minerals of his region. I have reason to regret that I came to know him so late and only for a brief space: his acquaintance would have been the more valuable to me, and his memory will be all the more cherished by me, since among native-born Americans he was the only amateur of natural science I got to know and could question on that subject. If among his countrymen there were many of his exemplary diligence and zeal after knowledge, America would soon know better its own productions, and natural history would be greatly enriched.

"caster. This college will bear the name of Dr. Franklin, "who has given to it largely. The German nation is greatly "rejoiced over this institution. The enthusiasm and gen- "erosity with which they go about furthering every object "having reference to their nation and their religion, cause it "to be hoped that this college will within a few years be "inferior to none of the oldest colleges in America, in wealth "and public regard."—By a letter from Prof. Mühlenberg, of the corporation, June 6th, 1787, it appears that this German college has actually been established, with five teachers. Prof. Mühlenberg is the Principal, Pastor Hendel Vice-Principal; Pastor Melzhaimer, Professor of the German, Latin, and Greek languages; Mr. Reichenbach, Prof. of the Mathematics; and the English minister, Mr. Hutchins, teaches the English language and Belles Lettres. (Vid., *Allgem. Litt. Zeit.* 1788, No. 14)—The Assembly of Pensylvania has also recently determined to establish a public school at Pittsburg.

The collection he has begun of domestic minerals is indeed small as yet, but none the less remarkable, since a better is nowhere to be found. Among its contents are: **Shorl,** from the neighborhood of Lancaster, sprinkled in quartz and sand-stones. Carnelians, and other colored pebbles, from the Conestoga. Terebratulites, from the Middletown region, which are taken by the country-people to be petrified hickory-nuts. Beautiful **Lead-spar from Pequea Creek** in Pensylvania; the ton of this ore gave 1500 pounds of lead, and a few ounces of silver besides; the superintendent of the mine asked of the share-owners a 13th part of the outcome as his proportion for services rendered, which being refused he filled up the mine, and the work stopped. **Pit-coals** and **Slate** of various quality, from the Susquehannah. **Whet-stones and Touch-stones,** of which the gold-smiths make good use, from near-by Lancaster. **Hog-stones, Smoke-topaz,** fine **crystals, cubical marcasite, eight-sided crystalline iron-ore** (*Minera ferri 8-edra. Cronst.*), **black chalk** from this region; **Ringing-stone** (*Saxum tinnitans L.*) from Potts-grove; **Soap-stones,** and other related soft stones, from the South Mountain; brown-flecked **Marble,** a **porphyritic stone** with shorl, divers **clay and marl-earths** from the country round about, and many other ores and stones, mention of which would be tedious.

I got to know another worthy man of great good sense in Mr. William Henry (Judge of the common pleas). He showed me a tolerably pure **rock-crystal,** of at least 5 pounds' weight, from this region; **lead-ore** from the Juniata, which contains calamine as well; in the flues beneath which the lead is melted zinc-flowers

are deposited in great quantity. Among other curiosities, I took pleasure in examining a little machine of which Mr. Henry is the inventor, + and engaging in an amicable dispute over the possibility of making such a machine, designed to go against the wind. It is very simple and fully accomplishes the effect desired. A wing-wheel of tin, such as is used in the ventilators of windows, has attached to its axle a six-inch, iron spindle-tree, which rests on a frame making an acute angle, or triangle, pointed towards the wing-wheel, each bar fixed at the other end to a small, smooth wheel; beneath the point of union of the bars there is adjusted a larger wheel, double-toothed. On these three wheels the machine rests and moves. On the spindle, immediately behind the wing-wheel and just above the double-toothed wheel, there is a double screw-shaped groove-attachment, from which a thread is so wound about the lower wheel that when the spindle is set in motion by the wing-wheel the toothed wheel must move forward. If, therefore, the wing-wheel is revolved by the wind or by blowing with the mouth, the whole machine moves directly against the current and with a speed proportional to its strength. But this machine is practicable only on a firm surface into which the under toothed wheel may grip. However, Mr. Henry states that he is about putting together another machine which, if attached to a boat, must bring it against the current of a stream, being set in motion merely by the force of the current and of the wind. But he will not publish this machine until he has reason to expect some reward for his invention, for he is sure that by means of it the difficult return-passage on the Mississippi and the Ohio may be con-

siderably eased, to the advantage of his country. From the plan of the first machine, however, it should not be a hard matter to divine that of the second. I pass over other experiments, magnetick and electrical, which employ the leisure hours of Mr. Henry in a useful and agreeable way, and show him to be a thinking and self-examining man.

The very bad condition of the road and of the weather, with other hindrances, prevented a visit to Ephrata, the seat of a small religious body which lies near to Lancaster almost unremarked, but by reason of its distinct customs, opinions, and manner of life deserves to be better known than it is in America, even at a little distance from its sequestered retreat. The account I set down here is borrowed, but is the most complete I could obtain, and from the hand of a faithful and attentive observer.

Ephrata or Dunkard-Town is a little village of middling size; stands in a small but so much the pleasanter valley, by a small stream 15 miles from Lancaster. Along with a part of the lands adjacent, it is the property of a small society of people who call themselves Dunkards or Dunkers, and are for the most part of German descent. The place is triangular in shape and in the middle there is a large orchard. The little brook which runs through most of the village is a natural protection on one side, just as on the other, a ditch and dike planted with fruit-trees. They get the name Dunkard, it is said, from their manner of baptizing their new converts; that is to say, they dip (**tunken** or **tauchen**) them in a stream, as is the custom also of the Anabaptists, from which sect however they are distinct. The founder of the sect was a German who.

some 40 years ago, settled in the region where later Ephrata was established, at that time for many miles around thick wilderness. Alone and content he lived here many years, and supplying his few wants by his own industry, he could the more easily withdraw from intercourse with the rest of the world. But by degrees the country grew more settled, and a good many Germans came to live there; several of these, moved by the exemplary manner of life of this man and acting on opinions similar to his, joined with him and founded a society, which by the coming-in of new members soon became numerous. It was thus not a sect already formed and removing hither from some other place; it originated here where it still remains and has spread no farther. But at present the society is in a decline, and numbers hardly 200 members, a figure inconsiderable in comparison to what it once was. Men and women clothe themselves in summer in white linen, and in winter in white woolen cloth. Their habit consists of a long, wide, tunic reaching to the ankles and girdled about the loins, and furnished with a cowl for head-covering, for they wear no hats. Under this tunic they wear a rough smock, and small-clothes. The men let their beards grow long, but cut short the hair of their heads. They are an industrious, amiable, and inventive people, hospitable and beneficent. Their especial food is plants and roots, for they abstain from meat as detrimental to that expiatory continence which Christians should practice. Their lean, pale look is warrant that they do not indulge the body. Only when they celebrate their love-feasts do they allow themselves meat, mutton, that is; at such times the Brethren and Sisters assemble in a large hall and eat in company.

Other pleasures, beyond the interchange of religious exercises and domestic affairs, they know not. Twice a day and as often at night, they meet for worship. Only sick persons lie on beds; all others, on hard boards with a block for pillow. Men and women live in separate dwellings, and under different regulations. The buildings for the Brethren and Sisters are of timber, but spacious, and each supplied with dining-hall and prayer-room, for mostly they keep apart at their religious exercises. These buildings are divided into cells, each large enough for one person; without ornament, but neat and cleanly. Between Brethren and Sisters there is no intercourse, except that demanded by the tendance upon their common affairs; not even by marriage. But if a couple desire to withdraw from this regulation and enter into the state of matrimony, they are then regarded no longer as full members of the society nor is it permitted them to dwell any longer among the unmarried, but they must go to Mount-Sion, a mile from Ephrata, or into the neighborhood round about, receiving from the common treasury what they need for their setting-up. However, they continue to wear the dress, are regarded as associates of the congregation, and give over to it their children to be educated.

The chief religious principles of these Dunkers are about as follows: that a future happiness is to be attained only and solely by penance and outward mortification of the body during this life; and that, as Christ through his meritorious suffering worked the salvation of the human race as a whole, so each individual man, by fasting, temperance, renunciation of all that is superfluous in dress, pleasures, &c., must likewise gain his

own salvation. Therefore humility, temperance, and Christian virtues generally, are the chief topics of their discourse. They believe and assert that a man may gain more of beatifical merit than he is in need of on his own account, and that accordingly the overplus of his good works may help another to win salvation. They keep the sacraments of communion and baptism; with them, grown persons only are baptized, and by immersion. They deny the inheritance of sin, and teach the freedom of the will. To them all force is sin; even self-defence against danger and legal process, no matter if occasion arises through falsehoods or the taking-away of their property by force. They celebrate the Jewish Sabbath; in their worship make use of no forms, but pray and preach from immediate impulse. They believe that the Savior preaches the Gospel even to the dead, and that since his resurrection, the souls of the just are occupied in imparting his teachings to such as have died without a knowledge of them. They reject the eternity of the punishment of Hell, and believe that the Jewish Sabbath, sabbatical year, and jubilee-year are prefigurements of certain periods which are to come after the great Day of Judgment, and these passed, the souls of those who have not entered at once into beatitude, gradually purified and made free of their corruption, may be sooner or later prepared to enter into eternal bliss.

Besides the large dwelling-houses mentioned, one sees at Ephrata a good many smaller buildings, meant chiefly for manufactures. For however monastical their system and a few of their principles may seem to be, they have no wish only to pray, and live fatly and indolently, but it is their purpose to **pray and work.**

This same mode of thought inspires all other sects to be found in America, and contributes to the forming of useful citizens. All manner of crafts are carried on at Ephrata, diligently and skilfully. There are here a good oil-mill, a paper-mill, and a printing-press. + Parchment, leather, woolen and linen cloth are fabricated, and more than the society itself has need of. The Sisters are engaged in the making of wax-lights, artificial flowers, and other small works and embroideries, suitable to them, which they sell to visiting strangers.

Many years ago, on account of a schism in doctrine and forms of worship, four or five of the Brethren withdrew from the community and went to live apart in a house of their own. Although these were no longer in full association with the other Dunkers, they held their rights to a share of the common income, which in addition to that they made by their own industry, was sufficient for their support. They discarded the long tunic, and wore shorter garments, girded about, and hats. They were not looked upon with contempt, for adopting forms of their own, but were treated with the love and patience which are the ground-principles of this community.

The approach of winter admitted of no long stay at Lancaster; the two days we were there heavy snow had fallen, and the cold winds made us uneasy whether we should not find the crossing of the Susquehannah difficult. From Lancaster it is 10 miles to Wright's Ferry on that river, which is there some two miles wide, not deep to be sure, but full of reefs and little islands, leaving but narrow passage-way for boats going up and down or crossing, so that with high

winds, strong currents, or ice, travellers are often delayed many days, and this would have been our case had we come a day later. The whole road from Lancaster hither, and farther on to York, is over hilly limestone land, or rather, through a broad, uneven limestone valley formed, on the right, by the chain of the South Mountain and its branches, of which the Codorus Mountain is not the most inconsiderable, and on the left, by the continuation of the Welsh Mountains. The country is everywhere well settled and farmed, indeed the county of Lancaster is generally regarded as the most fertile in Pensylvania, yielding 20 and 30-fold. But at this season of the year the land did not appear at its best. Twelve miles this side the Susquehannah lies

York in Pensylvania; a small town, regularly planned, of perhaps 300 houses, and five several houses of worship. The place was settled only 40 years ago, and here also the Court-house stands at the middle, where the main streets cross. The Codorus, a small stream not navigable, runs through the town. The inhabitants are very largely Germans. What they need of foreign, particularly the indispensable West Indian goods, such as rum, sugar, mollasses, coffee &c., they fetch from Baltimore in Maryland; not because that city is nearer to them or offers a better market for their flour, grain, and cattle, but on account of the disagreeable and uncertain ferriage over the Susquehannah. All manner of craftsmen and artificers are to be found in this and other similar country-towns; especially, it appears, are many wall and standing-clocks made here, at least, in most of the houses along the road I saw very well designed works, with the rubric of this place.

The following instance happened in this neighborhood, and deserves mention as a contribution to such history, and as proof of how often trifling occasions bring the understanding, for a long time obscured, into full and sound activity again. Michael Car, the son of a farmer of this region, was in the war before the last often in the field against the French and the Indians. Misfortune in love was the cause of his becoming first melancholy and then raving mad, and in this state he passed several years in the Pensylvania Hospital at Philadelphia. Growing somewhat quieter, he was taken back to his parents, and for 20 years, in the deepest crazyness, unfit for any work or society, he had been cared for as an object of pity by his friends. By chance, during the last war, there came by his home a recruiting-serjeant with drum-play and standard flying. He no sooner heard the old familiar military music, than springing suddenly up he cast off his rags, in all reasonableness asked for decent clothing, and followed the serjeant. And from that moment he had and kept the complete use of his understanding.

Wagons and horses meeting us on the road hither were all in excellent order; Pensylvania has this advantage (as well as the back parts of Virginia and Maryland) over the other provinces and those regions nearer the coast, the want of inland navigation making them more careful of their teams. They have here a strong and large breed of horses, kept in good condition, and always looking sound and fit, whereas the skeletons along the coast are thin to the point of collapsing. The Pensylvania breed supplies fine and comely coach-horses; but lacking steady work these strong Pensylvania horses have not sufficient bottom for long

journeys or unwonted exercise, and easily go gouty and blind. They are especially subject to foundering, **or rather,** it may be that all American horses are more so than the European; but the fault certainly lies more in the extremely careless and unfeeling management of those who attend them than in the weaker constitution, as it is claimed, of the animals themselves. The freight-wagons of the Pensylvania farmers are strongly built; the front and hind-wheels stand close together; the body of the wagon slopes very much forward, so that with the help of the very high front-wheels, the laden wagon more easily gets over unevennesses in the road and other obstacles. Generally all these wagons are covered with a coarse cloth, stretched over hoops, and on the journey serve their drivers for lodging. ✚

Leaving York, the Pidgeon-hills are seen to the right, which appear pretty high and belong to the South Mountain; in their forests bears and wolves are still found, and they often pay unpleasant visits to the farms in the valley, through which the road continues over limestone beds.

M'Callisterstown, 18 miles from York, a market-town of about 200 houses, and perhaps 30 years old; and 6 miles beyond, a large village, Peterlittle'stown, are the last places in Pensylvania. The need of such borough-towns, where shop-keepers and craftsmen come together and supply the other scattered and sporadick settlers with conveniences, clothing, utensils, and articles of luxury, (giving these in exchange for the products of their land and flocks) is felt most where there are none; and the solitary farmer, too remote from towns and markets, has a superfluity of provisions but suffers for lack of many other neces-

saries, and must deny himself all manner of pleasures which could be secured him in one way or another by what goes to waste.* Thus for a long time, in Pensylvania and in other provinces, the establishment of such inland borough-towns has been an object of diligent care, and it is with pleasure one observes from their rapid increase that they are contributing greatly to the well-being of the inhabitants. For this reason I have observed all through which I have passed, and so much the more, because there is nowhere to be had a complete list of such places. These country-towns of the farther regions have for the most part quite the look of our German market-towns; the houses, according to the taste of the inmates, are painted divers colors, and the interior arrangement is very little different from the German, for most of the inhabitants are German. Here and there are Irish families, upon whom the Germans, as better and more orderly economists, look down with a peculiar pride and arrogance. German tavern-keepers along the road have

* However, something is to be said for these isolated and scattered settlements, and all the advantages that mode of life has always had are to be found here. Such an existence, conformable to nature and the ancient customs, has been finely described by Möser. "The man living apart has privileges "which people elsewhere and now are again coming to see "the value of. About his house he has his lands and woods, "carries on his tillage as it pleases him, and in time of need "has always something at hand to tide him over. He is not "so much exposed to fire and pestilence, in time of war lies "remote, and in peace does not strive unduly after luxury, "that so the thief may not come his way. Distance from "neighbors and the village tap-house is besides assurance in "some measure against temptation, wrong desires, and oppor-"tunity for evil." ✚

been directing us on to other German taverns, but not without reason, and it is pretty generally allowed that these are the best houses; at least, if this may serve as recommendation in any quarter, one finds in the German houses everywhere a warm stove, good beer, and at this season, wurst, hog-meat, and sauerkraut, all of which they regard as national prerogatives.

Maryland.

The boundary between Pensylvania and Maryland is shown by a broad line hewn through the woods. Tonny-town, a county-town of perhaps 150 houses, was the first place in this province. Thence the road led us over Pipe Creek, which flows in a deep bed to the Susquehannah, the land on both sides being excellent; and farther on, we crossed the Monocasy, a small stream, four miles from Fredericktown. We had come now about 110 miles through this same limestone valley, the beginning of which I remarked at Jones' Tavern. The higher levels of this valley may be regarded as a continuous plain, in which the several hills and irregularities are due merely to the streams cutting obliquely across, their course lying from the mountains to the sea. In this way every slope noticeable in this valley falls away to the east or the south-east. These lower spots afford most excellent meadow-lands, and make the extensive cattle-industry of the region profitable. On the other hand, the soil of the higher land is the same uniform reddish earth which in a dry season makes the best road, and in wet weather, the worst.

Fredericktown. This was the second time my road had brought me through this town. Bad weather occasioned a stay of several days; but no more than the first time I was there, had I the pleasure of the society of gentlemen. The clergy, and a few others whose acquaintance I sought, were absent now as before, and the remaining German and other inhabitants are the

most unmannerly people to be found far and wide. ✚ Here, as everywhere, there is much and loud complaint over the scarcity of hard money and the publick imposts. Shopkeepers and craftsmen, who must pay cash for their wares at Baltimore, give 15-20 per centum interest on loans; for specie circulates and is accumulated chiefly in the coast-cities, whence it is taken out in quantity by the ships bringing in imported goods. Before the war 6 per centum was a high interest; it is no wonder, therefore, if the people complain at the continually increasing price of foreign goods, when they are burdened with these high rates of interest and at the same time do not find so far a good market for their produce, trade with the West Indies being prohibited. The taxes in Maryland come to one and a half per centum of all personalty and realty, and at this time even household furniture is assessed. Many people absolutely cannot pay taxes, and still more have no desire to, until they are rigorously compelled, which resort is not neglected. Husbandry and farm-products are the same here as in the back parts of the neighboring Pensylvania and Virginia, that is to say, wheat, corn, and cattle mainly. At one time hemp was raised considerably; for the purpose old, well-dunged land was chosen in preference to quite new land, on which, elsewhere, it is sown. But this year Russian ships have brought hemp and cordage to Baltimore cheaper than it is to be had here.

Besides those occasions for suits at law everywhere common, Maryland is blessed in addition with a very particular ground of process, and this is the variation of the magnetick needle, if it is not perhaps partly the fault of the instrument or the unskilfulness of those

who go about with it. Property in land, according to its extent, is indicated in the deeds of sale, reckoning from a certain tree, rock, or other object so many rods by one course of the compass, then again so many rods by another course, continuing thus until the measurement comes around to the first land-mark. After some time, during which the needle has varied, the lines run with it are not to be found again where they were, and the differences between the new angles and the old must, if the tracts of land are large, give all the more considerable results: in this way it happens not seldom that a survey new-made after a good many years cuts off from the neighbor's plantation a piece of arable and tilled land, giving him instead, at some other corner, a piece of woods, it may be, or swamp land or other barren strip. And so arise discords, suits at laws, and agreements, from all which the attorneys draw good use. In other provinces the occasion of such misunderstandings is avoided through a fixed marking of the lines by suitable land-marks, the boundaries of estates not being governed by the variableness of the magnetick needle, which however might easily be corrected by exact observations and calculations. The inconveniences of this system are felt and the necessary changes will be made through statutory ordinances, if the legal gentlemen, (as some people are apprehensive they will) do not prevent it, seeking to keep open this productive source of cases.

The back road, which leads from Fredericktown between the South and North Mountain to Carolina, was from all accounts not to be travelled at this season of the year without great difficulty; so instead of taking that road, as was our plan, we had to keep on this side

the South Mountain. Thus, on the road to the Potowmack we had this mountain to the right, and to the left another chain, of lower hills, which ended suddenly near the river in a high, broken-off peak, visible far around and from its shape called the Sugarloaf-Mountain. The limestone valley mentioned above continues between these two chains. A few miles before we reached the banks of the Potowmack this valley became more declivitous, and everywhere about in the streams there appeared rounded stones and other evidences that at one time the bed of the river had extended far beyond its present limits. The banks for more than half a mile from the river consist of rich, fat, black soil which, one year with another, returns many fold what is entrusted to it, and without once being dunged. Nowles-Ferry, where we were set across, is much above the Falls of the Potowmack,* and the river is therefore less rapid; the tide does not come this far up, and the fish are only of the fresh-water kinds,

* I have already mentioned in the first part that it had been taken into consideration in Virginia and Maryland how to remove the obstacles this fall presents to navigation inland. According to recent accounts this important enterprise is already begun; and it is found that the difficulties to be overcome are less serious than had at first been feared. The apparently good progress of this business rejoices the landowners above the falls of the Potowmack. A private company is carrying on the work, under the sanction of the government and the direction of General Washington. For the additional advancement of inland commerce, a road has been hewn out 53 miles long from the farthest navigable branch of the Potowmack to Morgans-town on the Monongahela. This was done at the cost of the state of Virginia which in this way has opened a very easy and convenient communication between the inhabitants to the west and the east of the mountains.

among which great, fat eels of 5-6 pounds' weight are not seldom taken. Gold-perch and full-fish are likewise caught here, and the taste of them is praised, but I have not seen them. The river is here a mile wide, its banks high, and (as well as a few small islands) set with stately trees; what with the fine prospect towards the distant mountains, at a better time of the year this must be a splendid landscape. The breadth of Maryland in this hinterland, from Tonnytown to the Potowmack, which divides this province from the following, is 43 miles.

Virginia.

Leesburg is the first Virginia town on this road, a place of few and insignificant wooden houses. From its high, pleasant, and healthful situation the proposal has been made to establish a Latin school here, and on the door of the tavern there was a special notice recommending the institution to the public which should certainly give it support, there being everywhere in America, outside the chief cities, a lack of suitable schools and educational establishments. It is not always the custom to hang shields before taverns, but they are easily to be identified by the great number of miscellaneous papers and advertisements with which the walls and doors of these publick houses are plaistered; generally, the more of such bills are to be seen on a house, the better it will be found to be. In this way the traveller is afforded a many-sided entertainment, and can inform himself as to where the taxes are heavy, where wives have run away, horses been stolen, or the new Doctor has settled.

From the Potowmack to Leesburg (12 miles) and a few miles farther, the surface is still limestone continued from the valley beyond the river, not reckoning the broad flat of the old and present channel. The limestone, where it comes to the surface on this side in Virginia, is the same grey simplex often mentioned above. Small, and very large, fragments of **breccia** were to be seen, composed of rounded pebbles and sand, bound together with lime. The soil between the

river and the Leesburg region had a good and fertile look, containing a strong proportion of red, iron-bearing clay, at times appearing by itself in hardened fragments, which from the deep color might be taken for blood-stone. Nearer towards Leesburg traces of limestone were less frequent, and a red sand-stone was to be seen. The chain of hills, to our left beyond the Potowmack, grew continually lower; we approached nearer to this ridge 6 miles from Leesburg where it shows a white, fine-grained, quartzose rock (Grindstone). In this region we crossed Goose Creek, at this season pretty wide, deep, and rapid. From several circumstances it appeared to me afterwards that going in a southeasterly direction we had, without knowing it, quite crossed the chain of hills, (now become still lower), which as far as this marked the southern limit of the Fredericktown limestone valley; for farther on neither species of rock was to be seen, and we had to go many miles through the common red clay, at that time wet and viscous, a tedious and vexatious road.

Along this road it was matter of no little astonishment to see so much waste or new-cleared land, having just come from the very well settled and cultivated regions of Pensylvania and Maryland. The reason does not lie in any worse quality of the land, which is scarcely inferior to that beyond the Potowmack, but in the fact that individuals own great and extensive tracts of land, of which they will sell none, so as to leave their families the more. All of them are very much disposed to let land in parcels, they retaining possession and seeing their land as much as possible worked and settled by tenants; but tenants are not easily to be had, so long as it is anywhere possible to buy land. This policy, which

will certainly be advantageous to the posterity of such rich and important families, has in the neighborhood of New York and elsewhere stood much in the way of cultivation and settlement, whereas the back parts of Pensylvania, Maryland, and even a portion of Virginia, have been more rapidly settled, poor families being able to get title to small tracts of land. The smallest possession has for every man more charm than the most imposing leasehold. In addition, the Virginians of the lower country are very easy and negligent husbandmen. Much and very good land, which would yield an abundant support to an industrious family, remains unused when once a little exhausted, no thought being given so far to dunging and other improvements. New land is taken up, the best to be had, tobacco is grown on it 3-4 years, and then Indian corn, so long as any will come. And in the end, if the soil is thoroughly impoverished, they begin again with a new piece and go through the rotation. Meantime wood grows again on the old land, and on the new is at pains to be cleared off; and all this to avoid dunging and all the trouble involved in a more careful handling of their cattle, if dung is to be had.

Although we had not yet come far into Virginia, there was to be observed already a considerable difference in the arrangements of the plantations and the character of the people on this side the Potowmack. A plantation in Virginia, and also in the lower parts of Maryland, + has often more the appearance of a small village, by reason of the many separate small buildings, which taken all together would at times hardly go to make a single roomy and commodious house. Here are living-rooms, bed-chambers, guest-chambers, store-

rooms, kitchens, quarters for the slaves, and who knows what else, commonly so many small, separate, badly kept cabins of wood, without glass in the windows, of the structure and solidity of a house of cards. This plan is not so much the consequence of any particular taste, as of necessity. In the settlement of a new plantation there is concern for only the most indispensable buildings, and a hastily built block-house is all that is needed at first; but by degrees, the family increasing and more land brought into cultivation, greater convenience becomes an item. And thus are built gradually a good many small houses and cabins, commonly without the assistance of carpenters, patched together by the people themselves and their negroes. This being an easier method than to put together a large house all at once, one often sees such little houses growing up where there is neither material nor capital for bringing them together in one solid house. In such cabins then, about which all the evidences of negligence are to be remarked, it is nothing extraordinary to see the lady of the house, and women generally, clothed and adorned with great fastidiousness; for the fair sex in America cannot resist the propensity to make themselves fine, even when remotely situated they must forego the pleasure of being admired except by the casual traveller. We had gone many miles through the woods, had seen only a few wretched cabins, and arrived finally at a house that had been indicated to us, which appeared not greatly different from the rest, not a whole pane in the windows, neither rum, nor whiskey, nor bread to be had, a draughty, empty place; but in return we had the altogether unexpected pleasure of making our devoirs to several ladies dressed tastefully in silk and

decked with plumes. But it must be observed that in the love of display the fair of the southern provinces go far beyond those of the northern, and that similar phenomena in similar circumstances are not to be looked-for in Pensylvania; as also, that the carelessness of the men in their dress is quite as striking as the vanity of the women.

Beyond Moore's Tavern and the Red House, (30 miles from Goose Creek), there again came in sight a rather high range of hills, which lay now to our right and kept a southwesterly direction. These were the Bull-run-Mountains; between them and the South Mountain there is limestone; but to the east of them, none. This circumstance makes it probable that the Bull-run-Mountains may be perhaps the continuation of the low range which about Goose Creek only seemed to disappear. In these mountains there are still many deer. One which had been shot a few days before weighed about 190 pounds, and this was regarded as a very unusual weight for these animals. In one of the taverns where we shared the remains of a wild turkey-cock, it was told us that without feathers and entrails it had weighed 28 pounds, which is here quite as uncommon, but more to the south they weigh as much as 40 pounds at times. The woods, so far as could be determined in their leafless condition, were made up of the same varieties of trees as in the more northern regions, in greatest measure at least. Our road getting continually more to the east, hills were less to be seen, and by degrees we drew nearer the tobacco country proper. To be sure, tobacco of no bad quality is produced towards the west among the mountains; but the profit from it is greatly diminished, because it must be

hauled over long and difficult roads to the places where it can be received by the European ships. In this region a great quantity of tobacco had been ruined by a frost in the month of August past, and it has been learned that in the back parts of Carolina a similar damage was done at the same time. This happens here and there so much the more easily because many planters raise nothing but the Sweet-scented Tobacco, which is a smaller and tenderer plant, but brings two and a half shillings more in the hundred, or 25 shillings Virgin. Current the hogshead.

We spent a night at a plantation where, according to the custom here, travellers are lodged for a price, under the style of 'Private Entertainment,' but no tavern is kept. In the item of public houses Virginia and the other southern provinces are worse off than the northern. The distinction between Private and Public Entertainment is to the advantage of the people who keep the so-called **Private houses**, they avoiding in this way the tax for permission to dispense rum and other drinks and not being plagued with noisy drinking-parties. Other public houses lacking, travellers are compelled to seek out these and glad to find them. Here, one eats with the family both thick and thin homany (a preparation of Indian corn), drinks water at pleasure, is not free to demand and has no right to expect what he wants, but pays quite as much as elsewhere, in houses where he lives as he pleases, is better served, and not obliged on coming and going to be very grateful for the reception. On the other hand, it must be said for these 'private houses' that in them one has to submit to a general interrogation but once, on the part of the family, whereas in the taverns every person coming in

must be thoroughly answered, since there is no place apart, where one may avoid curiosity or occupy himself with his own affairs. Our host had a numerous family; in order to provide for them, he wished to find a purchaser for his land, which was in good order, with much clean meadow. Hereabouts, an acre of land fetches from 25 to 50-60 shillings Virgin. Current; he would sell his for 40 shillings cash money, and with the proceeds remove over the mountains to Kentucky, where he could buy as much land as would give each of his children a sufficient portion. For the people throughout are set upon establishing their children in land-estates which is difficult to manage in the older parts, and hence the incessant migrations to the farther regions. This was an extremely well-disposed and industrious family, which through an especial diligence and attention produced and made ready almost all of what they needed; for their land and their cattle afforded them the materials. They had flax, cotton, and wool, which were woven into articles of clothing; hides for shoes and other purposes. There was no lack of all kinds of meat, and in drinks the orchard furnished a sour cyder and whiskey, and a sweetish, not unpleasant beer is made from the persimon (fruit of the *Diospyros*). That is, the bruised fruit is made into a dough with wheat-bran and baked, and this bread is afterwards boiled and let ferment. This drink had been made especially for the approaching Christmas festivals. Next after tobacco, the most important crop is maize, the chief nourishment of the family, the negroes, and the large and small stock; for everything lives on corn. Finally, tobacco pays for what they need besides, contingencies and luxuries; tobacco pays the taxes,

gives the women their indispensable silks and laces, procures other foreign wares, coffee, tea, sugar, drugs, and everything which is not produced at home. Notwithstanding tobacco is the especial source of the prosperity of these planters, maize is of no less importance to them. Failure of this **most general and essential** article of food * makes it necessary for the planter to buy his corn, and he must often fetch it from a distance, if he is not to let his slaves and cattle suffer; and so he loses more than the profit from their labor on tobacco. It is the very dry summers which especially damage the maize.

From here we got out of the right road, but were not aware of it because for as much as half a day, on a great, broad road, nobody met us but a few simple negroes whose geography seldom takes in more than their master's plantation. We passed Cedar-run at a place which might have been dangerous from many deep holes, had we not been so fortunate as to hit by chance upon the right ford, a narrow one. To set us

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* Regarding maize, so important in American husbandry, see Kalm's description, Maize in North America, its Culture and Uses, *Schwed. akadem. Abhandl.* XIII—This is the grain of the indolent.—Each stalk has commonly 2-3 ears, and each ear 3-500 grains. It is a bad crop-year when the yield is not 200 for one. Two bushels of seed are enough to supply a large household. The grain stands much untowardness of weather. The leaves are eaten readily by cattle.—Maize alone does not make good bread, but is mixed with wheat, rye, or barley. Porridge and broth from maize are called by the English *Homany,* by the French *Sagamité,* and by the Indians *Sapaan.* From maize-groats and maple-sugar the Indians prepare their *Quitzera,* a strength-food, which they use on long journeys.

into the road again people directed us through impassable woods and swamps, where we should have stuck had not a good old man met us at the right time, and taken the trouble to show us the way. There was no tavern anywhere far and wide in the region, and he indicated to us the plantation of a Captain B. H., whose house, as he said, stands open to every traveller, and the man himself is obliged to strangers if they will call upon him. After a day of tedious and idle wandering-about we finally reached this belauded house, which stood on a very pleasant hill, with much open land about it. The customary negro cabins and other farm-buildings formed together a little village in which the finer and larger house of the Captain stood out well by contrast. We described our adventures to the Captain and the necessity we were under of asking for refreshments and a night's lodging, which he was willing for, but at the same time remarking that his house was no tavern. A reminder which we scarcely expected in a hospitable house (as later he boasted his was known to be throughout the country), and one not sustained by the hay, maize-bread, water, and fish (of which they take 2000 at a catch) we and our horses were entertained with.

A clear, warm, and lovely day seemed indeed to promise well for the pleasant climate of this region; but this same landscape, so agreeable on the 9th of December, ✝ was seen a few years ago covered with snow on the 10th of June 1781, and in that year far to the south there was snow a foot deep in the month of May at Yellow-Cliffs in North Carolina. This changeable weather is a hindrance to the growth of fruit-trees in the region, where the warm spring tempts out the

blooms very early and late malicious frosts are often very damaging.* In Virginia, therefore, cyder is not so general a drink as in Maryland and Pensylvania.

Of the 4000 acres which the Captain owns, only a very small part has been made tillable for he himself, through his negroes, finds it impossible to work the whole or put it to use. He has a few Lease-holders, † and wished there were more of them, because with them one may grow rich without work. He would prefer Germans for tenants, but so long as land is to be bought in the interior of America these will be wise enough not to spend their sweat on any land that is not their own, even if they must be content with very little.

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* Late Spring-frosts, which in the middle and southern provinces often come very unexpectedly, spoil the hopes of the farmer commonly, and rob him of the fruit his full-blooming trees had promised. Observant husbandmen have therefore sought to obviate this unpleasant event, and not without success, choosing for their orchards a northwestern exposure, where the trees are visited by the more frequent and colder winds blowing from that direction. In this way a too early blooming is prevented, and the end is gained of having the bloom appear after the greatest danger from sharp Spring-frosts is past. Other farmers, if they have reason to fear a frosty night, take the trouble to set a-fire great heaps of brush or straw on the winter-side of their orchards, and it is said that this precaution is of use in very many cases, and preserves the blooms which in neighboring orchards, not so protected, are quite killed—A similar device is made use of in Hungary to keep off May-frosts from the vines.

† These lease-holders or tenants must gradually bring into an arable condition the land they take over, giving for 100 acres about 1000 pd. tobacco. One acre of good new land yields a hogshead of tobacco or 1000 pounds, the medium worth of which is 10 guineas. The leases run for short terms only, and are then renewed.

For other reasons as well, the German and Irish servants brought over in such numbers have been long unwilling to apprentice themselves in Virginia or Carolina, nor have they cared to settle there if not possessed of considerable property and able to buy slaves themselves. They are too proud to work with and among the negroes who in Virginia and Carolina are almost the only working people. For the Virginians as such are an indolent, haughty people whose thoughts and designs are directed solely towards paying the lord, owning great tracts of land and numerous troops of slaves. Any man whatever, if he can afford so much as 2-3 negroes, becomes ashamed of work and goes about in idleness, supported by his slaves. Thus the introduction of the negroes has been injurious to the moral principles of the inhabitants of these provinces, has made them sluggish and arrogant; and at times cruel, because of the despotic power they have over their slaves. Besides, the cultivation of the land merely by negroes is not the most profitable, which the people themselves see plainly enough and would like to get rid of them, but what is to be done with them and where are other working hands to be found?

By the grown-up banks of a small stream, on the Captain's land, a narrow vein of copper-ore has been discovered, which according to a test made at Philadelphia is said to yield 25-30 pounds in the hundred. The work is very little advanced at present, the owner intending to follow the circumspect method and have his negroes, whenever they are not otherwise busy, dig as much as possible (not a difficult matter, doubtless, since the vein lies very shallow beneath the surface, from all appearances), and then he will make arrange-

ments for smelting. This whole region is overlaid with a firm red clay very similar to that in Jersey. In a well, dug on the hill near the house, this same earth was found to a depth of 50 feet, mixed with more or less sand. At another place near-by a fine, compact free-stone occurs, of a reddish color, and quite similar to that used about Reading and in Jersey for walling iron-furnaces. The red soil, still prevailing here, disappeared after some miles of the road we followed towards the east in order to get into the main road to **Fredericksburg**, and afterwards there was sandy land, not the flat country proper but hilly as yet and better settled and tilled than the region from which we had last come. The **pitch-pine**, (*Pinus foliis ternis*), which farther back had been observed only here and there in sandy places, and singly, now appeared in quantity, composing whole forests which gave the country a green look and with the help of a warm day, (69° Fahrenh. the 10th of December), made the road a pleasant one; at least more agreeable than the marshy and leafless woods through which we had passed.

Crossing Acquia Creek we came by all manner of roads to the Rappahannock, not without having gone wrong at times; for the universal answer one gets, on asking the way, is: Keep in the main road, or, Straight on;—everybody knowing the roads in the parish and thinking that even strangers must find it easy to keep in the straight path which commonly is very crooked. The Rappahannock, which is of less volume than the James or the Potowmack, rises in the South Mountain; and is not so navigable inland. A mile and a half above Fredericksburg, at Falmouth, it makes a fall over the granite line, and only from that point is navigable to

its mouth in the Bay, a distance of 90 miles, but the total length of the river is some 200 miles. At this place it is perhaps half a mile wide, and at its mouth not more than 4 miles wide. However, ships of heavy burthen cannot come all the way up to Fredericksburg.

Fredericksburg. This town of middling size stands partly on the low bank of the river, and partly on the heights immediately behind, which once composed the bed of the stream. The public buildings of the town, churches, market-house, court-house, lie at this time in ruins, and for no other reason than that during the war there was no use for them and they were neglected; for no hostile troops came this way, who might have destroyed them. The tobacco-warehouses here had a great store on hands. Here and at Alexandria the price of tobacco at the time was only 25 shillings Virgin. Current the hundredweight. The European ships were all out, the time when people must pay their taxes was at hand, and the merchants were using the opportunity to offer the lowest prices.

Above Falmouth, near the falls of the Rappahannock, is one of the finest and most considerable iron-works in North America. ✚ More than 6-800 tons are worked there yearly, it is said. Mr. Hunter is the owner. These works are distinguished besides by a rolling and a slitting-mill, and of this sort there are only two or three in America, the former British government having prohibited the setting up of mechanisms of that kind. The rolling-mill is adapted for drawing iron-plate, that is to say, the machine is such that between two smooth, steel cylinders the plate is drawn with more rapidity, more easily, and with greater uniformity than it is possible to do under hammers. The slitting-mill is another in-

genious mechanism for splitting broad iron bars at a stroke into many narrower bars, which is a much slower process by the customary method under the hammer. It was a regret to me to be informed of this remarkable iron-works, only after it was too late; for not withstanding my continued inquiries, I heard no mention of it in this town. Generally in America it is difficult to get information about anything whatever. The curiosity of the Americans is concerned only with matters of trade and politics; everything else around them from custom seems to them of no consequence, although they are always jabbering about the distant wonders of other provinces.

The hills close about Fredericksburg and on the river consisted chiefly of sand-stones of divers colors. Fragments of fine granites also appeared, which species of rock indeed makes up the ridge causing the falls of the Rappahannock. These fragments were of quartz, feldspar, and mica sprinkled now and again with shorl. The banks of the stream, between here and the Bay, at many places show whale-bones, shark-teeth, oyster and other muscle-shells.

Winter-shad is the name they have for a fish which, throughout the winter, appears in this and the other rivers of Virginia, and is taken in great quantities in nets. But it is said to be very different from the shad proper (*Clupea Alosa L.*) which comes only in the spring. I have not seen the fish.

Not far from Fredericksburg we had the honor of breakfasting with an American General, whose dress was conspicuously party-colored; a large white hat, a blue coat, a brown waistcoat, and green breeches adorned his short, thick person. From here on, one

passes through a tract of level and open country, in which, however, some entertainment is afforded by the sight of many country-seats embellished by very good, large, and at times tastefully planned dwelling-houses. Still more numerous and pleasant seats lie along the beautiful banks of the Potowmack and the other rivers, and therefore a journey by way of these rivers offers far more of variety to the eye than the common roads by land. The rich Virginians who, from their luxury and love of display, have for many years been of evil repute among their more frugal neighbors to the north, prefer generally to live in the country rather than in towns, and according to their circumstances and opportunities spare nothing in rendering their houses agreeable both outside and in.

There appeared now and again extensive fields seeded to wheat. Some years before the outbreak of the war the cultivation of this grain had already been undertaken with more enthusiasm in this region; that is, after the profit from their tobacco had been greatly lessened by the heavy duties imposed in England, and besides, their lands, (even then exhausted), not producing such large crops of tobacco, the profitable culture of wheat + gave the land a new and greater value. Here, as in other parts of America, wheat is sown on the last year's corn-fields, the old stalks not having first been cleared off. A peculiar insect, called weevil,*

* In the American Philosoph. Transactions there are to be found sundry articles treating of this injurious insect; but in none of them is its species determined; the names Weevil and Grub describe merely a worm or maggot which eats into other bodies. Is this perhaps the *Curculio granarius L.*, brought over from Europe, or a related species?

often damages the wheat greatly, especially if the grain lies long in the straw unthreshed; but in this case, it is said, lime scattered in does the insect harm. Also, the wheat-fields are fouled by faulty wheat and many kinds of weeds (darnel, false grain, cheat); to obviate this, it is recommended that the grain be soaked in a strong salt-lye,—what floats is discarded, and the good heavy grains are to be seeded, mixed with shell-lime.

Sundry butterflies were still to be seen at this late time of the year. Of birds we observed none except a few vultures and wood-peckers, the Motacilla Sialis, Loxia Cardinalis, and the Virginia partridge (*Tetrao virginiana L.*). It is said the partridge-hen lays 17-20 eggs, and all the hens belonging to one covey use the same nest; the claim is made that now and then 2-300 eggs are found together. The cocks are distinguished by white feathers on the throat and head, where the hens have brown. We were astounded to meet on this road two travelling journeymen, Germans, their luggage slung behind quite in the German manner; they were journeymen-tanners from Alsace, who had arrived in the Chesapeak Bay in a French ship, and were now to seek their fortune in this country. A traveller on foot is in Virginia an uncommon spectacle; only negroes go a-foot; gentlemen ride. But the whole country being made up of gentlemen and their negroes, and almost no other distinction obtaining, it is always something extraordinary to meet a white foot-traveller. The taverns, or ordinaries as they are called in Virginia, are intended only for the reception of gentlemen, especially in the lower country where very few teamsters come, and they always take with them their provisions and horse-fodder and lie in the bush. Along the chief

roads these ordinaries are commodious enough, when there are not too many guests at one time. Coffee, ham, and eggs are commonly the sole entertainment. Ham and hog's flesh are great delicacies to the Virginians, without which no landlord thinks he could do business.

From Fredericksburg to Richmond we had 79 miles to go; really the distance is not so much, but the bad condition of the roads and the number of broken bridges made detours necessary. The road for the first half of the way was mainly through extensive woods again, pitch-pine for the most part, but marshy spots were numerous, full of holly, calamus, and the smooth winter-berry. These swamps, which are often large, contain good soil, and do not deserve to be so neglected, for in most of them it would not be difficult to effect a drainage. In these forests also many plantations lie scattered about, which are not always to be remarked from the road. The Pamunky and Mattapany are two streams of the region, inconsiderable there, which rise in the South Mountain and by their junction form the York River. On the banks of the Pamunky lay several French metal cannon, 24-pounders, with their names inscribed, e. g. *l'Advocat, le Démoniaque* &c., and all with the motto: *Ultima ratio regum.* They had been brought there by water in the year 1781, as a precautionary measure, and being found by some of Cornwallis's troops, were spiked and rolled into the river, out of which they are just now being fetched again. Two miles from the Pamunky, we arrived at Hannover Court-house. As once it was the custom in Europe, in the furtherance of piety, to place tap-houses near remote churches and chapels, so in America, to the ad-

vantagement of justice, the court-house is never without a like convenience. Court-houses, where the monthly and quarterly judicial assemblies for each county are held, are placed by preference in the middle of the county, and if there is no little town already there, the court-house is built in the woods none the less. On a very warm mid-day (18 Decemb.) we found here a fine circle of ladies, silk-clad and tastefully coiffured, sitting about the fire. This was not so extraordinary in itself, but it was something new to me that several pretty vigorous young blacks, quite in their natural state, should be tumbling about before the party without giving scandal.

Hannovertown, a small place, on a creek which flows into the York River, was the first and only market-town on the road from Fredericksburg to Richmond. Virginia (and in like manner the other southern provinces), notwithstanding its great compass, has in comparison with the northern provinces a less number of villages or country-towns. On this and other creeks which fall into York River, their banks covered with thick growth and for the greater part of a firm, red, clayey earth, there are found whale-bones and remains of crustaceous animals. The tobacco produced in this region is thought to be better than that grown more to the north, and brings 5-6 Spanish dollars the hundred; it may be said that the quality and price of this staple are in general higher in the more southern districts.* Here and at other

* According to a contract of the year 1786 between the Farmers General of France and Mr. Robert Morris, late Treasurer General of the United States, the latter made him-

places along the navigable creeks and rivers, the English factor is to be seen again, who supplies the planter, in exchange for his tobacco and timber, with manufactured articles and other wares; but rich planters also, here and there, have set up their own warehouses, whence their neighbors may get what they need. Here too new land is always taken in for tobacco as soon as the old is impoverished, albeit the people know and admit that old well-dunged land would be quite as profitable; but the trouble of laying down grass, and gathering feed for winter so as to keep the cattle in stalls or folds to make dung, all this they regard as more irksome than cutting down trees and rooting up stumps; preferring to let the cattle wander about in the woods and swamps to seek a meagre winter support. In this region also we saw for the first time several mules, which are beginning to be liked because they are so perfectly adapted for the American œconomy, thriving with scant attention and bad feed. These were hitched to large tobacco-hogsheads, which are drawn for miles over the bare and level sand from the plantations to the ware-houses.

In order to reach Richmond we had to leave the sandy flats and, approaching the granite line, got again into the uneven, hilly country pre-adjacent, where oaks and other leaf-trees were again to be found in the

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self answerable to deliver tobacco in French ports at the following prices:

Best quality of James and York River, the hundred	à 38 livres
Potowmack and Rappahannock tobacco	à 36 ——
Maryland tobacco	à 34 ——

woods, pines appearing only here and there in low and sandy spots.

Richmond stands on the hilly banks of the James River, over against the falls of this stream which is here perhaps half a mile wide. The houses of this town, a short time since of little consequence, are almost wholly of wood and scattered irregularly on two heights, divided by the Shokoes, a small brook; the number of them is not large * nor are they in themselves of a handsome appearance. What gives the place fame and regard is the falls of the James River, in addition to its being the seat of the Virginia government.

The falls of the river were the first object of my curiosity. The lower terminus of these is next the town; but their whole breadth or extent is 7 miles upstream to Westham, a small place, and in this distance the total perpendicular fall of the water is only 71 ft., according to an exact measurement said to have been made. Hence the falls are of themselves inconsiderable, and one looks in vain for high rock-walls over which the water plunges straight down; but a vast number of great and small fragments of rock fill the bed of the river as far as the eye can see, and through these the current, with foaming uproar, makes its way. What with the help of devious banks and the forests on both sides, the impression from a view of the whole is great and pleasing. The noise of the falls, especially at night, is heard not only throughout the town but, before the wind, for several miles around. These falls

* Recently the number of the houses of Richmond was estimated at 280, and that of the inhabitants at about 2000.

are occasioned by the granite ledge, so often mentioned, which runs along the eastern coast of North America for the most of its extent, and gives rise to most of the falls, to those at least found near the ocean. This granite line runs from north-east to south-west, a-slant the bed of the river flowing from west to east. The rock-mass is chiefly a true granite, made up in divers proportions of feldspar, quartz, and mica; but quite as frequently there are found large unmixed masses of these single constituents. Especially, there occur now and again great fragments consisting entirely of a beautiful rose-colored feldspar which comes off in rhombs over an inch in length. In the rock protruding from the water very many giant-pots, or cavities, are to be seen, of various diameters and depths, these hollow places are within quite smooth and most of them larger below than at the opening. Kalm and Bartram explain their origin, in a very probable way, by the grinding of little stones (almost always found inside) moved about circularly by the whirls of the current. Besides granite, properly the rock species here, one finds also specimens of all the more remote species, brought down by the current, ground, and deposited.

The James River, up from its mouth in the Bay, is one of the greatest and most beautiful of American streams, and on account of the profitable tobacco-trade which it facilitates and furthers, one of the richest. It is navigable for large merchantmen as far up as three miles below Richmond, that is, below the falls. The tide comes up to the falls. From Westham on beyond the falls only flat-boats and canoes may be navigated, and that no farther than to another falls in the South

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Mountain.* The James rises in the Alleghany Mountains under the name of the Fluviana, and receives a considerable addition from the South Mountain, in the Riviana. Off to the side, below Richmond, there is another little fall near Petersburg, over the same granite ledge. Both of these falls are very advantageous for the fishery; for by these obstacles in the channel the fish coming up-stream are hindered in their progress, crowd together in vast numbers, and become an easy prey. Early in the spring, and at times even in February and March, herring and shad appear, which are seen in the Delaware and the Hudson not before the middle of April and in all May; there are other fish also common to these rivers and to those of Virginia.

The falls, incessantly churning the water and throwing it up to the air, are thought to be the occasion of the clouds, which are more frequent here, it is said, than at other places where circumstances are dissimilar; on this ground also it is claimed further that Richmond is not so healthy as, from its situation in other respects, it might well be supposed to be but is very subject to autumn and intermittent fevers. But these diseases being general along the coast the falls of the river cannot be regarded as the especial occa-

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*Recently there have been set on foot plans to remove the obstacles to inland navigation in the James River, and to establish a connection between it and the Great Kenhaway river, to the west of the mountains, these two streams being separated by a land-passage of only 23 miles. In this way an easy communication will be opened between the James and the Ohio. And General Washington has also proposed a further connecting of the Potowmack and the James, (presumably by means of the Shannandore).

sion, any more than the universal use of swine flesh, which I remarked above; with more reason the cause may be taken to be the swamps and the amount of standing water in the country.

Richmond has not always had the honor, which fell to it four years since, of being the seat of government of the state of Virginia. Before the founding of **Williamsburg, Jamestown,** now in ruins, was the capital of the province. But after the settlement of the interior progressed more and more, it was found convenient to desert Williamsburg also and to establish the seat of government at Richmond, 60 miles to the west. Even now it is tedious enough for the delegates from the more distant counties of this extensive province to travel hither for the Assembly; for Virginia, what with the land beyond the mountains (to which, next after New York, it makes the largest claim), is of greater compass than any of the United States, and numbers 72 counties.* But that part lying to the east of the mountains is in itself of great extent, in length some

* Virginia, in the year 1783, included the following counties: Accomac, Amelia, Amherst, Albemarle, Augusta, Bedford, Berkeley, Botetourt, Brunswick, Buckingham, Caroline, Charles City, Charlotte, Chesterfield, Culpepper, Cumberland, Dinwiddie, Elizabeth City, Essex, Fairfax, Farquier, Fluvannah, Frederick, Gloucester, Goochland, Greenbrier, Hallifax, Hampshire, Hannover, Henry, Henrico, James City, Kentucke, King George, King and Queen, King William, Lancaster, Loudon, Louisa, Lunenburg, Meklenburgh, Middlesex, Monanghahela, Montgomery, Nansemond, New-Kent, Northampton, Northumberland, Norfolk, Ohio, Orange, Pittsylvania, Powhattan, Princess Anne, Prince Edward, Prince George, Prince William, Richmond, Rockingham, Rockyridge, Shenandoah, Southampton, Spotsylvania, Stafford, Sussex, Washington, Warwick, Westmoreland, Isle of Wight, Williamsburgh, York.

250 miles from the upper Potowmack to the North Carolina line, and from the coast to the foot of the mountains 180 miles in breadth; and about 800 miles to the extreme western limits on the Ohio. With this very extensive surface, the administration being as it is now, there must arise many inconveniences to which the inhabitants are exposed who live at a distance from the seat of government and of the highest courts. For example, if they are concerned in law-processes of consequence, which must be tried before the General Court sitting only at Richmond, they and their necessary witnesses are obliged to travel a couple of hundred miles;* for it is not the custom in Virginia, as it is in Pensylvania, New York, Carolina, and other provinces, for the Judges to visit those counties assigned them in order to pass upon cases, at law in the several counties, in this way sparing the subjects of the state long journeys, waste of time, and expense by reason of which many people are made shy of having recourse to the law for injustice suffered, or a theft &c. Thus I remember a case which a man in the upper part of Virginia told regarding himself. A very valuable horse had been stolen from him; he believed he knew who the criminal was and could bring sufficient testimony against him; but to travel 140 miles to Richmond with the witnesses, besides the other expense, would have doubled the amount of the loss sustained; he preferred therefore to let the matter go. The county courts proper have jurisdiction in trifling cases of debt and

* Besides the usual County Courts, which are held monthly in every county, Virginia holds annually two General-Courts, each for 24 days; two Courts of Appeal, each for 6 days; and two High Courts of Chancery, each for 18 days.

other litigation of small consequence. The Assembly deputies from those counties lying on the Ohio and Kentucky feel it burdensome to come 600 miles to this place, although they draw their day-money allowances; how much more of a burden must it be to private persons from that country, if their own affairs call them to this one seat of justice and government? They not only feel this, but are already talking of the necessity of establishing a separate government for those remote parts, or at least of having a Governor of their own: as indeed is the case in the province of New York, where besides one Governor at New York, on account of the distance and for the better keeping of order there is another at Albany, 160 miles from the capital. From the present form of government and the opinions prevailing, it seems highly probable that if those frontier regions of Virginia once get a Governor of their own, they will easily go a step farther and undertake to be independent of eastern Virginia; they think themselves warranted in some measure, because Nature itself has, by broad and impracticable mountains, placed a barrier between the two regions. Besides, their political and commercial interests will after a time make this necessary—but the most important item is that they hold themselves quite as much warranted as any of the other provinces in asking and asserting an independence, so soon as they feel themselves strong enough and find it to their profit to declare independence.

The law-making power of the state of Virginia is reposed in the Senate and the House of Delegates, or Assembly. The members of the Assembly are new-elected every year from among the qualified land-

holders, and those of the Senate every four years. The executive power is in the hands of a Governor, elected annually by the Assembly and the Senate, and a Privy Council, elected by the same every three years. The Assembly had just now come together for its half-yearly winter session; a small frame building serves the purpose, used also on occasion, with change of scene, for balls and public banquets. It is said of the Assembly: It sits; but this is not a just expression, for these members show themselves in every possible position rather than that of sitting still, with dignity and attention. An assembly of men whose object is the serious and important one of making laws, should at least observe a certain *decorum,* but independence prevails even here. During the visits I made I saw this estimable assembly quiet not 5 minutes together; some are leaving, others coming in, most of them talking of insignificant or irrelevant matters, and to judge from the indifference and heedlessness of most of their faces it must be a trifling business to make laws. At the open door of the hall stands a door-keeper, who is almost incessantly and with a loud voice calling out for one member after another. In the ante-room there is a tumult quite as constant; here they amuse themselves zealously with talk of horse-races, runaway negroes, yesterday's play, politics, or it may be, with trafficking. Nor must it be expected that this illustrious assembly shall be seen dressed as in other countries etiquette, in like circumstances, would demand. In the same clothes in which one goes hunting or tends his tobacco-fields, it is permissible to appear in the Senate or the Assembly. There are displayed boots, trowsers, stockings, and Indian leggings; great-coats, ordinary coats, and

short jackets, according to each man's caprice or comfort, and all equally honorable.

The pay of the Assembly-members was very recently fixed at 18 Virginia shillings, or 3 Spanish dollars; which means to the state a daily expenditure of 525 dollars, and their sittings at times last 4-6 weeks without reckoning time spent in going and coming. Formerly their pay was only 10 shillings a day. But during the war, nothing but paper-money being in circulation, the members preferred to take 50 pounds of tobacco *per diem* rather than accept their own currency. The Governor has 1000 Pd. a year, and the Speaker of the Assembly 500 Pd. However little the members may forget themselves, they seem unwilling to be mindful of others. On one of these days a bill was brought in, to allow those officers who had been returned to the Assembly at the instance of all the Virginia troops, the sum of 3 dollars a day for expenses, the amount to be charged on their long-standing salary account; this very reasonable proposal was resisted by all the members present until General Lawson ✝ arose and explained with emphasis the necessity and justice of the measure. As in all other public and private societies there are certain men who lead the debate, and think and speak for the rest, so it is also in these Assemblies. Among the orators here is a certain Mr. Henry who appears to have the greatest influence over the House. He has a high-flown and bold delivery, deals more in words than in reasons, and not so long ago was a country schoolmaster. Men of this stamp, either naturally eloquent or become so through their occupation, as e. g. lawyers, invariably take the most active and influential part in these Assemblies;

the other members, for the most part farmers without clear and refined ideas, with little education or knowledge of the world, are merely there to give their votes, which are sought, whenever the House is divided into parties, by the insinuations of agreeable manners and in other ways.

When the opinion of the House is to be taken regarding a question in debate, the Speaker calls first for the *Ayes* and then the *Noes,* given together in a loud voice by all the members present, and with a critical ear the Speaker judges from the strength of the noise whether the affirmative or the negative votes are in a majority. But if the votes are so distributed that the ear cannot plainly distinguish them, a ' division ' of the House is demanded, and the members form themselves into two groups and are counted.

The revenues of this state were at the time estimated at some 230,000 Pds. Current; arising from a levy of 2 per centum on property, a wheel-tax of 1 Pd. to the pair of wheels, 10 shillings negro head-tax, a duty of 5 per centum on imported goods, (half of this amount is allowed the Congress) &c. Of this the support of the government takes away about 50,000 Pd.; 40,000 Pd. go towards the payment of the provincial troops and interest on the amount due them, and the rest is applied chiefly to war debts * and interest-accounts.

One may freely assert, and without approaching the truth too nearly, that the government of this state (as of most of the others) is in a weak and doubtful situation, and that its present constitution will not avail to

* Virginia in 1781 was assessed with an annual contribution of 1,307,594 dollars to the general war-expenses.

guard it against future disquiets and internal confusions. The law-making power has not yet become confirmed in that regard which it must have if it is to be of use in its ordinances and regulations. Members are spoken of, even in public companies, with expressions unseemly and indecorous. Affairs in the Assemblies are conducted by a selfish and often mean party spirit. At each new sitting laws made during that just past are repealed and others draughted. Their laws are little read, and there is less concern as to the execution of them. Whoever cared to take the trouble of collecting anecdotes would have manifold proof of this. There is so much the less reason to doubt this shortcoming of a government, when the most considered men in the state are not chary of saying what they think to strangers. In a company the talk got on the extravagant demands which the tavern-keepers, (even under the eyes of the government at the capital), are accustomed to exact from travellers, notwithstanding all sorts of provisions are at a very low price. "There are laws enough against the practice, re-"marked a man of high rank, and moderate prices are "fixed by statute, but the gentlemen whose duty it is "to see that the regulations are observed give them-"selves no more trouble than people generally do "about laws and ordinances." As evidence of the very mild, indulgent, lenient government, it was stated that desertions among the Virginia troops have been very numerous; that recruits have been constantly sent in from the country to the army, but they generally come home after the first few weeks. And although the regiments were wanting men, although districts and individuals were continually obliged to repeat their

assessments, so as to foot the costs of recruiting made necessary by desertions, the authorities nevertheless were so philanthropical as neither to punish nor send back to the army those perfidious fugitives found within their districts.

The entire commerce of Virginia has for long been almost altogether in the hands of European houses who have maintained their ware-houses and factors here. Among the Virginians few have concerned themselves in trade beyond the keeping of little shops here and there, and throughout the whole province there are still hardly any houses who would be disposed, or in a position, to undertake large affairs. And in all Virginia there is no commercial town which in the extent of its business may be compared with Philadelphia, New York, Boston, Baltimore, or Charleston; the natural situation and activities of those provinces bring together in their chief towns almost the whole trade of the interior, whereas in Virginia this is greatly distributed, owing to the numerous navigable streams penetrating the country; and thus in many small Virginia towns together there is hardly as much business done as in a single one of the large places mentioned, albeit the total value of Virginia exports exceeds in amount that of any of the other provinces. So far the raw products of Virginia are exported almost entirely through European ships and seamen, these also bringing in European manufactures and other articles of trade. For Virginia itself, beyond little coasting-vessels and a few West India trading-boats, likewise small, has no large shipping of its own and few sailors. The tobacco-trade alone formerly occupied several hundreds of English vessels, and some

thousands of English seamen, and if only in that respect, was an object of the greatest consequence to Great Britain, which must now share the profits with other nations. To be sure, many merchant vessels are built in Virginia, but mainly for sale, and these are known and well-regarded as good, fast-sailing ships. Of the European merchants established here before the outbreak of the disturbances, and as British subjects compelled to leave during the war, divers came in the spring and summer with cargoes for Virginia, hoping to trade as before with their old friends and acquaintances. The government of Virginia, still full of bitter spleen, forbade them to land and obliged them to go elsewhere with their goods and seek other markets, which they soon found and not far off. Virginia then began to suffer for lack of European wares, and had to fetch, at a loss, from Philadelphia and Baltimore the very same it had at first prohibited. Besides, the ships of other European nations, against which there was no exception taken, if they came into the Bay were unwilling to be at the trouble of seeking purchasers for their cargoes among the few merchants scattered here and there, but preferred rather to go straight to one of the fore-mentioned places, where they could reckon upon a quicker sale. The Virginians moreover thought to deal on long credit, which they and all their neighbors have long been accustomed to at the hands of British merchants; but neither French nor Dutch were so agreeable as that, when the question was one of borrowing, and if they were, had oftentimes cause to rue their complaisance. Virginia needs and takes, (and has always), more foreign articles than it can

pay for with its own produce, and so has been for a long time indebted to the British merchants, whose indulgence and confidence were almost without limit. And now since this unrestricted credit is not to be had from the merchants of other nations, the lack of hard money is felt at this time more than ever before, for equalizing the balance of the European trade which is against Virginia. The money spread about the country during the war is still a help; but as this becomes gradually exhausted, embarrassment will more and more increase, unless new channels open for getting gold and silver from the southern parts of America, or unless the produce of the land is augmented, as it may very well be, from the nature of the soil.

The want of hard money is felt not only in commercial affairs but also in the collection of the public revenues, and the government has been obliged to pass an act proclaiming that tobacco, hemp, flour, grain, and skins are to be accepted of the people in payment of their taxes. For this purpose special magazines have been established and inspectors appointed, whereby the state is subject to additional expense. And the government, having to set up as a merchant, and pay the costs of ware-houses, inspectors &c., must therefore exact more of the citizen who cannot pay cash money, or suffer loss itself.

Richmond has only one public sheet, issued twice a week: + and so far as I know this is the only newspaper in all Virginia. Nevertheless it is inferior in every respect to the sorriest of the Philadelphia sheets, and in comparison with these, seldom contains any articles of importance; and in general this province is poor in

literary productions. Inquiring, I could hear only of a Mr. Jefferson, ✝ at this time a member of the Congress, as the author of several excellent political brochures, with the contents of which nobody seemed familiar. The constitution of Virginia, indeed, mentions liberty of the press as one of its cardinal principles; but at the beginning of the Revolution there was a law of the state forbidding anything whatever to be said or written against independence. However, if little is written in Virginia, there is all the more of speaking, for the Virginians are very conversable. They boast that among all the American colonies the English language is with them preserved purest and most complete, and one cannot altogether deny them.* But here and there a few negroisms have crept in, and the salmagundy of the English language has here been enriched even by words of African origin, and some of these are regarded as really meritorious additions, e. g., the negro expression '*toat,*' to carry something on the shoulder, for which there is no word in the English.

There is but one church at Richmond, one small church, but spacious enough for all the pious souls of the place and the region. If the Virginians themselves did not freely and openly admit that zeal for religion, and religion generally, is now very faint among them, the fact might easily be divined from other circumstances. Considering the extent of the state, one sees not only a smaller number of houses of worship than in the other provinces, but what there are in a ruinous or

* But in general the dialects of the English speech in the several American colonies are not so sharply distinct as those of the sundry districts and counties of England itself.

ruined condition; and the clergy for the most part dead or driven away and their places unfilled. Virginia has long granted a full liberty of conscience, but there were formerly in this state a smaller number of dissenters than in any other, and the English Church could be regarded as very nearly dominant: but this is no longer so, other sects having on the one hand greatly increased in numbers, and on the other, the English Church being compelled to give up many of its one-time privileges. The warmer adherents of that church, under the lead of a few ambitious members of the clergy, have in Virginia also made fruitless attempts to secure for the church its former legal preeminence; the opinions of the public were very much against this and the outcome was the thesis: that in a republick no church nor its ministers should be preferred by the government above the rest, no matter how great the number of members professing allegiance. ✚

No matter if special privileges are denied the churchly order, and in general an equality of all ranks is promoted and defended, the ladies here are not the more inclined to part with any advantage of position to which they fancy themselves entitled through the offices held by their husbands. News of the definitive treaty just arrived in America was the occasion at Richmond of illuminations, fire-works, banquetings, and finally, a ball, at which the honor of the first dance fell by lot to the very honorable daughter of a very honorable shoemaker. That the distinction should have been awarded by lot was the cause of great displeasure to the ladies of the Governor's family and his relatives, and the incident was the subject of every

conversation the next day, but the unanimous opinion was that the lot should be valid as against any claims of rank, and that no exception to the generally allowed equality should be granted even the fair sex beyond that due personal merit and accomplishment.

According to the principles of a general equality was the behavior at our tavern, which in its arrangements was very like an eastern caravansery. Mr. Formicola, ✝ a Neapolitan by birth was the landlord here. The entire house contained but two large rooms on the ground-floor, and two of the same size above, the apartments under the roof furnished with numerous beds standing close together, both rooms and chambers standing open to every person throughout the day. Here, no less than in most of the other public-houses in America, it is expected that rooms are to be used only as places for sleeping, eating and drinking. The whole day long, therefore, one is compelled to be among all sorts of company and at night to sleep in like manner; thus travellers, almost anywhere in America, must renounce the pleasure of withdrawing apart, (for their own convenience or their own affairs), from the noisy, disturbing, or curious crowd, unless it may be, that staying at one place for some time, a private apartment is to be rented. The Assembly meeting at this time was the occasion of a great gathering of strangers and guests at Richmond, and every evening our inn was very full. Generals, Colonels, Captains, Senators, Assembly-men, Judges, Doctors, Clerks, and crowds of Gentlemen, of every weight and calibre and every hue of dress, sat all together about the fire, drinking, smoking, singing, and talking ribaldry. There is in this no great ground of com-

plaint, because such a company at other times may be very agreeable, entertaining, and instructive; but the indelicate custom of having so many beds together in one room is the more surprising, since elsewhere in America there is much store set by decorum and neatness, which by such an arrangement as this must often be dispensed with.

The coming together of so many gentlemen from all parts of the province brought hither a great number of very fine horses. One could almost fancy it was an Arabian village; there were to be seen the whole day long saddled horses at every turn, and a swarming of riders in the few and muddy streets, for a horse must be mounted, if only to fetch a prise of snuff from across the way; but of coaches there were none, which in the larger towns elsewhere jolt through all the streets. Horses are a prime object with the Virginians; but they give their attention chiefly to racers and hunters, of which indubitably they have the finest in America, their custom formerly being to keep up and improve the strain by imported English stallions and mares. The pedigree of their horses is carried out with great exactitude. Virginia supplied the best and finest horses to the American cavalry, and the Virginia light horse was superior to every other in speed and capacity. But the province has no good draught and work-horses, and their teams, in the low country at least, are in general extremely sorry. One sees everywhere little, thin animals, hitched to wagons made of wood throughout, not the smallest bit of iron to be found in the construction. A collar of pleated straw, and a pair of rough leather traces, or perhaps of twisted bark, make the entire harness. The numerous

streams and creeks are indeed in many places a substitute for land-carriage; but for the rest, the reason lies merely in the great negligence with which the Virginians, and all Americans, treat their horses as well as their other useful animals, making it impossible for them to show a better condition. With the exception of those horses upon which as racers a high value is placed, all the others are let run about in the fields for pasture, without giving them in the hardest winter any protection against the inclemencies of the weather (and this even in the more northern provinces, Pensylvania, New York, Rhode Island), and many of these poor beasts are actually forced to get what little nourishment they can from under ice and snow. It appears, however, that most of the horses in America have not that delicacy of taste which causes European horses to refuse bad and unclean feed. Here they devour everything without distinction, the meanest hay and even their own excreta. In the army horses have many times been seen to eat salted meat, and in Canada they as well as horned cattle are fed the winter through on little frozen fishes.

On the south side of the James River, exactly opposite Richmond, stands a small town called **Manchester.** Between the two places the river is not wide, and in crossing one scarcely observes whence the current comes, the numerous rocks and small islands in and about the falls seeming at a distance to make up one continuous whole. A circumstance which it has been proposed to make use of in the construction of a bridge over the falls; for these rocks have an owner, who bought in for a few hundred pounds the lower part of the falls together with a narrow strip along either

bank, and he is now working at the project of a large and fine bridge, which would be the first and only one of the sort in America, if the projector can but secure permission of the Assembly and the right to make of this a toll-bridge. ✝ At Manchester I visited Mr. Jacob Rübsaamen, who at one time was engaged in mining and forge-works in Jersey, but the war breaking out set up a powder-mill in Virginia, the first in America. The saltpetre requisite was got in the mountains, but the sulphur was fetched from Europe; for although sulphur-pyrites is found in great quantity and in many places in America, experience proved that it would be slower and more costly to smelt the sulphur out in this way. The powder-mill, however, was unable to furnish much material, and in the end was burnt by British troops. Mr. Rübsaamen stated that here and there in America traces of antimonium are found, and that zinc is not rare, occurring oftenest in and about lead-mines, especially at Chiswells mine, in Virginia. Rich lead-ore is found in quantity, and at the surface on the New and Greenbriar rivers; copper near the Roanoke; iron-ore everywhere plentiful, among other places, a very good ore 20 miles from here in the county of Buckingham. There has been discovered a bed of pit-coals 12 miles from here, on the south side of the James River and above the falls, ✝ the occasion of discovery being the uprooting of a tree by the wind. The region is low, and it is probable that the bed was formed from the plant-earth choked up behind the falls. Four feet below the surface there is a white clay-slate, next, a blacker clay-slate, and then the coals. Trenches are dug straight down, and at 26-30 ft. the bed is not yet gone through; these trenches soon filling

with water, new ones are continually opened up, although this labor might be avoided. The coals, however, are not the best; all Richmond smells from them. They are sold at the river for 1 shill. Virgin. Current the bushel.

In the Virginia mountains are sundry warm and cold mineral springs, which from their taste are made up chiefly of sulphurous and vitriolate constituents. They appear to contain little of other salts and little fixed air, for no casting of bubbles or beads is to be observed. The best known are the Augusta hot Springs, in the county of that name. There are several springs there, called the sweet, the acid, the warm, and the hot springs. The sweet and hot springs are said to show a warmth, the one of 80 and the other of 110-115 degrees Fahrenheit. At first the water is unpleasant to drink, but soon becomes tolerable. Sulphur-pyrites or marcasite being found everywhere in the neighborhood, it is supposed the warmth of the springs is so occasioned. In that region also beautiful rock-crystals are found and amethysts. The Sulphur-Springs on the Greenbriar are celebrated for curing the itch and other skin-eruptions. Still another water of the mountains is spoken of, which it is said takes fire from a flame and is almost wholly consumed.* The county of Augusta generally, which comprises a part of the **North-Mountain** or **Alleghany-Range,** seems to promise many natural curiosities; in the

* Probably the same of which there ran a story in certain recent English papers, that a pistol shot sets it a-fire, and being quite consumed it leaves behind a salty ash; the Virginia county of Fincastle is mentioned, but no precise observer is given. ✚

country on Jackson's, the Fluvannah, and the Greenbriar rivers these mountains are said to have a ruder, wilder, more fearsome look, and are likely higher than anywhere farther north on the same chain; and I all the more regretted that the lateness of the season must prevent me from visiting that region; I should likely have found there more compensation for my pains than on the road to the Ohio. Of the county of Augusta **Stanton** is the capital, a place by no means inconsiderable, carrying on much trade with the farther mountain-country. The town lies in the remarkable, long, fertile, limestone valley which, between the North and South Mountain, runs through the greatest part of North America, and contains many other towns already mentioned, as, Lebanon, Carlisle, and Shippensburgh in Pensylvania, Winchester in Virginia, Hagarstown in Maryland, &c. Stanton has no navigable stream near it, but not far away rises the Shannandore, which makes a very long course to the north, and finally empties into the Potowmack. There is no other river of those parts which has a direction so different from the general. To the south of Stanton, on an arm of the Staunton river or Roanoke, is the remarkable Rock-bridge,* namely, where this stream has dug out a subterranean way through the limestone. It should be mentioned besides, that in the limestone mountains of that region *Cornua ammonis,* it is claimed, has been found, which has not been observed so far in the northern tracts of the range, in Maryland and Pensylvania, that is to say, although it occurs fre-

* Vid., *Beyträge zur mineralogischen Kenntniss des östlichen Theils von Nordamerika,* 102.

quently in Canada; and that a number of caves are found there, among which there is one in the county of Frederick, two miles from Fort Frederick, on the land of Mr. George Mills, said to be the largest on the continent. ✚

Two French commissioners, from what was formerly the French settlement on the Illinois, were at Richmond to lay before the Assembly claims for supplies furnished the American troops during the war and the garrisons of the forts on the Wabash and the Mississippi. From the dress and the behavior of these gentlemen, ✚ as well as from other information, good-living and luxury seem to prevail in a high degree in those distant and little known regions. Since the cession of that part of Louisiana to Great Britain, many of the French colonists have removed to the west side of the Mississippi and become subjects of Spain; but many are still on this side, about the Illinois, where several of their towns are of some consequence. They send their produce down to New Orleans, and fetch thence what they need; so far, as it appears, they have lived quite within themselves, and have little concern for what foreign power has the ruling of them. There are many Germans among them, and new colonists are continually coming in, people who do not find the Ohio country to their taste. The region of the Illinois and the Mississippi is much warmer, and of milder and shorter winters, than those parts of the east coast of North America lying under the same parallels. The soil is fat and fertile, and a new colonist arriving in the spring can, with a little scratching and seeding of the level ground between the trees, be sure of harvest enough of turnips, maize, and pumpkins, to keep him

during the first year. Wheat on this very wanton soil does not do well at first, going too much to straw. Pumpkins, a sort of gourds, serve as feed for their cows as well, increasing the milk, and may be kept until about Christmas.

Several days of bad weather delayed us in the prosecution of our journey. With the first glimpse of the sun, we set out on the road to Williamsburg. The hills, at the foot of which Richmond stands, seem to be composed of sand and clay. Along deep roads, or where streams cross, there were to be seen always the following strata: sand, sand and clay, pebbles, and other stones rounded by the water, of divers dimensions and often in thick beds, and under these again sand and clay. On the surface few stones were any longer to be observed, and after the first 10 miles or so those mentioned as buried beneath the surface appeared no more, none to be seen unless on the banks of brooks where they had been rolled down by the force of the current. From here on, the country towards the east, that is, towards the sea, grows continually a flatter slope, covered merely with sand, and this has given rise to the legend that in Virginia there are no stones, true only of the most eastern parts. Those stones, however, found buried at various depths, and rounded, are proof that it cannot have been so very short a time since this part of the world emerged from the water.

On the James River, 6 miles below Richmond at a little place called Warwick, there was formerly an iron-works of some importance, which was destroyed during the war. Farther down the river are Osborn's and Bermuda Hundred, pleasant places, but small. A

more considerable trading-town is **Petersbourgh**, on the south side of the James River and at the falls of the Appamatox, which a few miles below the town flows into the James. Petersbourgh exports a great quantity of tobacco and other produce, supplied not only by the Virginia plantations round-about, but brought in even from North Carolina. This town has a very unhealthy situation; its inhabitants seldom reach a great age, and have always to contend with intermittent fevers and their grievous sequelae; but notwithstanding the place is larger than Richmond, the number of houses being reckoned at 300. New settlers, however, are continually coming in, tempted by the advantages of the trade and shipping there, even if they must look to exchange health for profits. Near to Petersbourgh, and therefore on the south side of the James River also, there are two other small towns, namely, Blandford and Pocahunta. ✝ But chiefly along the northern and southern banks of the splendid James there lie a great number of the finest and most fertile estates, the sight of which we missed; for the common land-road from Richmond to Williamsburg, past Bottom-bridge, New Kent Court-house, Bird's &c., was mainly through gloomy forest, only here and there tilled land or a wretched cabin. And so, whoever will see Virginia in its greatest pomp must travel by stream.

The weather was propitious. Cool indeed, even cold, in the morning and evening, but once the sun got high there was summer, although it was the latter half of December. But really the weather in Virginia is quite as changeable as along the rest of the coast of America. In the summer months, June, July, and August the Fahrenheit thermometer often stands at

80-90-95 degrees, and this oppressive heat is accompanied by frequent sudden changes almost every day, and dreadful thunder-storms. The severer winter cold is commonly from January to the middle of March, but the cold does not continue equal for long: for the temperature of the air depending so much on the winds prevailing, there are very pleasant warm days in the middle of winter. The frequent and fearful thunder-storms of the warmer season of the year are regarded by the Virginians and not without reason, as a contributory cause of the great fertility of their lands throughout the most of that province. Commonly heavy falls of rain follow these storms; but if there is no rain-fall for a long time it appears as if the low situation of the fore-country and the many streams and swamps there form substitutes for the water of the air. By reason of the numerous storms, which rage especially here and in Carolina, but are little sparing of the entire coast of North America, and everywhere work great destruction, the people generally have spared neither cost nor trouble in protecting their houses by electric conductors, that beneficent discovery of the great Franklin. One fails to see them almost nowhere in the great towns or on the larger houses in the country.

Tobacco being the especial staple of this province, it is a matter of careful attention on the part of the government; and here, as I observed also of Maryland, the regulations are excellent for keeping this branch of trade in esteem, and securing buyers against deception.

The James River tobacco is reckoned the best sort which Virginia produces, and keeps its price pretty well unchanged at 6 Span. dollars the hundred. For

smoking one finds the coarse leaves of this tobacco vastly stronger and pleasanter than those of northern Virginia and Maryland which are milder and lighter on the tongue. In Maryland the plants are let grow until they have 8-10-12 or more leaves before they are 'topp'd,' that is, the tops are broken off so as to check the upward growth; but in this region the rule is to let the plants come to but 6, or at most 8 leaves, and it is thought that better tobacco is thus obtained. Here they raise much 'Sweetscented Tobacco,' which requires a good, light soil, and from its stronger quality should make particularly good snuff-tobacco. 'Long-green Tobacco' has great, fat, long leaves, and does best on a strong soil. 'Kitefoot' is an agreeable, lighter sort, and thrives on light, sandy soils. 'Varinas' gets its name from Varina, the splendid estate of a Mr. Randolph on James River. It is said that the tobacco raised about Little Frederick, and called 'Frederick,' makes exceptionally good canaster. Other varieties of this plant are the Oronooko Hudson, Thickjoint, Thickset, Shoestring, and many more, grown on divers kinds of soil, requiring different treatment, and only the planters themselves being able to distinguish between them. ✚

Cotton, (*Gossypium herbaceum*), is raised here and there even in Maryland but is far oftener seen in this more southern region. As yet none is exported, the people themselves using all they produce. This is an annual plant, and requires either good new land or land well dunged. The seed planted not all coming up, 6-8 grains, towards the first of May or earlier (when night-frosts are supposed to be past), are placed in little hills thrown up 3-4 feet apart. When

these come up, the weaker plants are pulled out, so as to give the few remaining more nourishment. After the plant has reached a height of a foot or a foot and a half, earth must be newly heaped up about it, and all foul growth weeded out; and continuing to grow until there are four or five side-branches, the plants are broken off at the top, and when these side-branches have each put out four or five buds, the ends of the branches themselves are broken off, so as not to let them grow into long, barren stems; but in this item there is not everywhere (especially in Carolina) the same sort of careful attention. Moreover the suckers, or young side-sprouts, must be nipped off. All this done, the plants are let bloom, mature, and stand in the field until there is opportunity to take them in, which is often not until late in October. The blooms stand only two days, white on the first, yellow on the second, and then falling, after which comes a pod-fruit of the size of a wallnut, and this finally opens. They have two varieties of this plant, one with a rough, and the other with a smooth seed, but there is no marked difference between the plants. Many people select carefully the smooth seed, and plant nothing else, the wool from it admitting of easier separation, by means of a hand-mill, between two wooden cylinders moving lightly the one over the other. Ants often damage the seed in the ground; and to keep them off, the seeds are mixed with ashes, luke-warm water poured over, and let stand over-night; in this way the seed swell a little, and the ants, it said, do not then attack them. The statement is made that even boiling-hot water does not greatly injure the sprouting faculty of these seeds, most of them coming up afterwards. Four

pounds of raw seed give about 1 pound wool. The wool, with the seed in, was formerly sold here and in North Carolina at 4-6-8 pence the pound.

Cushaws, a sort of gourds, are raised in Virginia in greater quantity and more generally than farther to the north; they have them black, yellow, and white, and use them for pot-herbs. Perhaps in no other country are all kinds of gourds and melons so much used as in America; in the summer and autumn one can not see without amazement the great quantities of water and other melons brought to market at New York and Philadelphia, as well as eaten in the country or let lie in the fields. The plant recommends itself because, under the warm sun, it does well without much attention or care. For whatever needs more than a little work without producing a great profit is not to the American taste. And so the pleasure of a fine garden is as yet scarcely known in Virginia. Perhaps a few of the most considerable families have made attempts, but commonly the people are satisfied with planting cabbage and turnips in an enclosed space, which goes by the name of a garden, and sticking among them a few uncomely flowers. The Virginians are so much the more at fault for neglecting a matter which might add to the enjoyment of a residence in the country and embellish their places, because their mild winters and warm summers must certainly give them many advantages. In the spring they have pease, beans, and other vegetables by the end of April, or at least, early in May, 6 weeks or two months earlier than in New York. With the passage of time they will indeed learn to make a better use of the advantages of their country than is the case among them at present. Bignonias ap-

pear here as large, strong trees. The Melia Azedarach (Bead-tree) is frequently planted before the doors of houses, and this originally East Indian tree stands the winters right well. In sundry gardens there are tea shrubs,* which succeed very well, and multiply easily. Besides the Hibiscus Syriacus, the Babylonian willow, the box-tree, the myrtle, and one or two other plants, I was able at this season of the year to recognize nothing by way of foreign growths which it had been attempted to domesticate. And nevertheless in the Virginia climate many useful and pleasant plants might be made to do extremely well; the domestic chesnut, the round-leaved ash, the European wallnut tree, laurel-cherry tree, the pomegranate, the bay tree, and many others, would find a congenial home here. Of indigenous plants not one was to be seen in bloom; evergreens excepted, everything was leafless and hibernate; and yet we were now below the 37 degree of latitude, and thus 4 degrees to the south of Rome, round about which, even at this time of the year, one can pluck many sorts of flowers.

* Later information gives assurance that in several parts of the United States the culture of the tea-shrub has been gone about assiduously and with good hopes of success; chiefly for the following reasons: China, like the American states, has a surface extended to the west and northwest; and lies towards the Southern Ocean precisely as the United States towards the Atlantic; these two countries are in the same latitude, and in both (and nowhere else) is the ginseng indigenous, and this last circumstance especially argues so great a similarity of soil and climate as to permit the hope that the tea-shrub will very likely thrive under American skies, at least the experiment should be a tempting one. And it should not be forgotten that sugar-cane, the basis of the whole West Indian trade, was originally also a stranger from the East.

Williamsburg. We arrived there in two days' journey from Richmond. The distance is 63 miles. The place lies in a pleasant, open plain, and even from a distance commends itself to the traveller by a particularly cheerful and stately appearance, and the impression is confirmed on entering the town. One may count this among the handsomer towns of America, even if not among the larger, the number of the houses being only about 230. Of the honor which it once enjoyed, of being the capital of Virginia and the seat of its government, there remains to it now only the title and the rank of a city. The houses stand at convenient distances apart, have a good exterior, and on account of the general white paint, a neat look. They are commonly of but one story above the parterre, and (except the public buildings) mainly timbered. The straight, broad, high-street is almost a mile long; several off-streets, running to the south and east, are planned in the form of the letter W. The streets are not paved, and thus are very tedious to the foot-passenger during the hot summer, from the burning sand and dust. All the public buildings are of brick, and several of them comely. The east end of the high-street is closed by the Capitol, or State-house, a large, modern building where formerly the Assembly, the Senate, the Privy Council, and the General Courts were housed. It is spacious and well carried out, and since at the time no better use can be devised for it, a Latin school is to be there installed. Works of art being rare phenomena in this young country, I must not fail to remark that in one of the lower rooms is a fine statue, of white marble, erected to the memory of a former Governor, Norborne Berkeley, Baron de Bote-

tourt. Exactly opposite this Capitol, at the west end of the high-street, stands the College, in honor of the royal founders called *William & Mary-College*. A building of two storeys, but not so tasteful as the former. This college owes its origin to the zeal of a Mr. James Blair, who opened a subscription to that end. William and Maria endowed it with 2000 Pd. sterling and 20,000 acres of land, together with the right of purchasing and possessing lands to the value of 2000 Pd. annual rent, and appropriated for its use besides the revenue of a tax of 1 penny in the pound on all tobacco which should be exported from Virginia to other colonies. Mr. Blair, who had himself given very considerably to the College, was the first president and held the office 50 years. He left legacies the design of which was especially the setting up of an establishment for the education of young Indians, ✝ and the work was for some time carried on, but was at length given over as not answering the purpose had in view. Experience has indeed demonstrated that the Indian youth, on whose instruction and moral up-bringing time and pains have been spent, and apparently not without good promise of shaping them into civilized subjects, grasp nevertheless every opportunity of escaping from restraint and oversight, and joyfully return again to their inborn way of life, wild, rude, and careless, finding in it vastly more attractions than in all the pleasures and conveniences which cities can offer. I myself knew a certain Montresor, a half-Indian, who had been brought up in this College, but after he left it preferred to rove about among the Indians doing nothing, rather than follow a quiet life; many of this sort could be named, for the European more easily adapts himself to

the manners of the savages than they do to civilization. Although this Indian establishment was abandoned as fruitless, the college proper still goes on, where the higher sciences are taught, and besides this there is at the present time no other College in the southern provinces. At this university there are now 7 Professors, one for divinity, one for law, one for medicine, and the others teach languages, philosophy, and the mathematics. The Professor of Physic is Dr. Maclurg, the author of an excellent treatise on the gall. The number of those studying here is about 50. Some of them live in commodious rooms in the College, the others lodge and board in the town, paying 36-40 Pd. Virginia a year. The total annual expense of a student can be met for 100 Pd. Virginia (333 Span. dollars). Doctors in all the faculties are graduated; but most of the students complete their training at the English and Scottish universities, preferring to make the highest degrees there.

Midway of the chief thoroughfare on the south side, stands a little six-cornered building, surrounded by a wall, which was formerly an arsenal; and over against this is the Court-house. Both buildings stand a little back from the street so as to form a Square, from which one has a view of the most important buildings and the finest part of the town. The palace of the one-time Governors, also on the north side of the principal street, lies in ruins; this was a large and handsome building; but through the negligence of the American troops quartered there after the siege of York was set a-fire, although there are those who say it was done by Loyalists. Williamsburg is now a poor place compared with its former splendor. With the removal of

the government, merchants, advocates, and other considerable residents took their departure as well, and the town has lost half its population. The trade of this place was never great, its distance from navigable waters not being favorable to more active affairs which thus became established in smaller towns. It lies between the James and York rivers, 7 miles from the one and 12 from the other. The inhabitants of this town and of all lower Virginia desire greatly that the seat of government should be brought back thither, and are doing all they can to bring it about; and chiefly because they fear that besides the great loss they have already suffered they may have to pay taxes for erecting at Richmond the new public buildings necesary in future. The merchants of the country round about were accustomed formerly to assemble here every year, to advise about commercial affairs and matters in the furtherance of trade. ✚ This also has come to an end. Thus, like so many older ones in Europe, do cities in this new world lament for the uncertain fate of a past glory.

In the tavern here there is very good, but very dear entertainment. Black cooks, butlers, chamber-maids, made their bows with much dignity and modesty; were neatly and modishly attired, and still spoke with enthusiasm of the politeness and the gallantry of the French officers.

Provisions are very cheap; butchers' meat 2 pence; hog meat 3 pence the pound; a turkey-cock 2 and a half shillings; a turkey-hen 2 shillings; a dozen pullets 6 shillings.

York in Virginia, called also Little York, lay out of our road indeed, but the excursion was warranted by

curiosity, to see this remarkable theatre of a decisive military event, as well as by the wish to examine the great shell-banks there, † which are an object of curiosity to every stranger. From Williamsburg the road, 12 miles, lies over sand-flats and through woods almost the whole way. Two and three-blade pines, (*Pinus foliis geminis, & Pinus foliis ternis. Gron.*), with a few Virginia juniper trees, almost entirely compose the forests of this and the remaining lower coast country. Leaf-wood is rare; but now and again we saw a few holly-trees (*Agrifolium vulgare Gron.*), with their pomp of red berries, the American thorn, the wax-shrub, and the sour-berry (*Calicarpa americana L.*).

Half way on the road we passed a mill, of which the race had laid bare a great shell-bank. Here lay in confusion millions of muscle and cockle-shells, intermixed with somewhat of sand and clay. These are not petrified; on the contrary, many of them are in a soft, weathered condition, many as well preserved as if just come from the ocean, others broken and crushed. Some of them, especially the thicker clam-shells, had been touched by time in a very delicate way, skeletoned, so to speak; their larger and stronger ribs or veins, forming a net-work lengthwise and across, were exposed, the interstitial filling of lime having been consumed; one could thus discern the actual plan and structure of a muscle-shell, not easily done otherwise. A number of the muscle-shells lay fast locked, but filled with shell-sand, or sand and clay, which had taken on completely the figure of the matrix, and one had only to let the mass harden to get a most beautiful replica of the shell. In many cases, this core was already so much hardened as to admit of handling; and

with time and favorable circumstances it would entirely harden, losing the matrix, which now and then is soft enough to come away by rubbing. These shells, however, are so tightly closed, and their edges entire, that it is a matter of wonder how even water could penetrate, not to speak of earthy particles, with which they are so full-stuffed that it must certainly have required many years. Here also we came upon nature at work making similar bawbles, counterfeit clams, pectinites &c., from hard, red, iron-bearing clay-earth, of which I had already seen a few at Philadelphia, that had been found on James River upon sinking a well. Strange it is that many, indeed most, of the thick shelled muscles especially, were bored through at one or another spot with a hole, exactly round, smooth, and in diameter from 3-4 lines. That this has not recently happened, is plain to see; but how did it happen in the ocean whence the shell came? and what other creature is the borer? I have never observed the like in the fresh shells, similar in character, of oysters, cockles, and the clams.

After a close examination it was found that the muscles and shells accumulated here are of such species only as are still to be seen almost everywhere along the eastern coast of North America, even about New York and Long Island. The following could be plainly identified among the wrack:

Ostrea; the common American longish oyster.

Ostrea Pectines; Scollops and Cockles; with 18-20 ribs; of these two sorts are clearly distinct; one with smooth and somewhat rounded veins, the other with more deeply grooved, rough veins; and still smaller ones with fewer veins.

Venus Mercenaria. (Clams.) *Mya arenaria?* (Pissers.) *Solenes, Anomiae, Mytili, Arcae, Patellae, Lepas Balanus* (Barnacles); *Dentalia,* smooth and simplex, and others twisted, *Serpulae;* cockle-shells, such as are to be found about Long Island; remains of madrepores; large bone-fragments, presumably of whales; with unrecognizable traces of many other sorts of crustaceans.

This inland shell-bank, as much of it as has been dug out here, is about 6 feet in depth, and lies beneath a bed of sand at least 30 ft. deep, of a reddish color, containing several strata of grey clay, but absolutely no shells. So if these crustaceans lived at one time on the strand, as their still extant relations * are accustomed now to do, there was requisite a long space of time for the heaping upon them of such a burden of sand; for this mill stands in a flushed-out bottom much lower than the general surface of this part of the continent, which I have elsewhere described in its bearing and connexion.†

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* There is much similarity, it appears, between these American shell-banks and the shell-hills of Bohus, which Linnaeus in his *Westgothische Reise* describes as miracles of that province. These are on the main-land, in many places scarcely more than ¼ of a Swedish mile from the sea, but the accumulations are found directly beneath the shallow black earth; the shells (as is often the case here) are perfectly preserved, clean and white, and consist, as these, of varieties still to be seen on the coasts of Sweden, Norway, England, and France. In Sweden these buried shells are used for lime-burning and plaistering, and also for bettering the roads, which in this way are made pretty firm.—These shells might be made use of for this purpose in America as well.

† Vid., Beyträge zur mineralogischen Kenntniss des östlichen Theils von Amerika. §. 8.

Similar phenomena are to be remarked also on the high banks and in the sundry deep ravines of the York river, the Indian name for which is the Pamunka. Here the walls perpendicularly cut, from the river 30-40 ft. high, are more than half made up of broken, crushed shells mixed with sand and clay; in which however there are distinct horizontal layers, at times of a redder color, at times yellower, and showing most plainly at the foot of the banks. Of these layers some are rather hard, and may be broken off as stones; and it is not the lowermost, weighted down by the rest, that are the hardest, but rather those in the middle, lying above material looser and softer, and thus the greater compactness must be due to the presence of other constituents.

The little place, Yorktown, of which the name has been immortalized by the remarkable siege, lies in part close by the river, or between the river and the deep shell-banks I spoke of, but mostly (and the better part) on the high river-bank itself. There is a pleasant prospect over the river to Gloucester, and of a considerable part of Chesapeak Bay. The inhabitants had not yet recovered from the disquiets of the war, and many had not returned to their homes. Traces of the devastation were still everywhere visible, and several families were living at the time in the ruins of buildings that had been shot to pieces. The ships sunk in the river for the protection of the garrison were still in their places, and it is thought not worth while to be at the trouble of raising them, for there is every reason to believe that after two years they will be found so eaten by the worms, (which do much damage in these waters), as to be no longer usable.

We returned the same day to Williamsburg, and on the following morning took up our journey towards the South. On the road to the James River, a mile from Williamsburg, another shell-bank had been laid bare at a mill site, beneath a covering of red sand and clay 40-50 ft. deep. ✚ From the appearances here and concordant phenomena observed later elsewhere, it is plain enough that all these shell-banks lie at a fixed depth beneath the upper stratum of sand and clay, along the whole flat coast, but are exposed only at such places where brooks and rivers, on their way to the sea, have cut sufficiently deep into the great slope; which, (were it not for these cuts effected by the water), would appear as a continuous, uniform, and gently declivitous plain.

Seven miles from Williamsburg we came to the James River, leaving the high sand-flats as much as half a mile from the river, and getting into deep, level, low-grounds. The wind was high, and there was a hesitation about setting us over the river, three miles wide, which having no high banks or hills to break the force of the wind is so much the more disturbed by every puff, particularly when the current is met by the in-coming tide. Hoping to see the wind laid, we remained some time on the bank, for neither at the ferry nor between it and the town is there any retreat to be had at such a juncture, and the owner of the ferry is quite unconcerned if, with untoward wind and weather, the traveller finds shelter or not. We rode to some houses in the neighborhood, to avoid returning to the town and in order to be near by, should the wind come better; but we were nowhere taken in, and were not tempted to praise overmuch the far-sounded Vir-

ginia hospitality. They all said the trouble was Lord Cornwallis; here he had burned the stable, there he had pulled down the house, and again, stolen the beds. And so, reluctantly and after much waiting and fruitless attempts, we had to go back to Williamsburg, and on the next morning make our way to the ferry again. The second time we came with the rising of the sun, when the wind is generally calm; but Lord Cornwallis served again as excuse for a long delay; he had ruined the wharf and the tide was not yet high enough on the flat shore to float off a boat laden with men and horses.

Not far below the ferry lies James Island, which at one time was only a peninsula, but during a severe storm with high water the river broke through the narrow tongue of land. There stands

Jamestown, or rather merely the rubbish of a town so called; for notwithstanding it is described here and there in the newer geographies as a place of 80-100 houses, one or two, and they ruinous, is all that the town contains at present. This was the oldest town in Virginia and the first seat of government. The famous Captain John Smith established it in the year 1606, choosing a spot where an Indian village had stood and the ground thus somewhat made ready. This Indian village was called Paspahoc, just as the James River was formerly the Powhatan. Here was the first church in North America built, of which as little trace remains as of the general glory of the town, but it is called a city none the less, forms a county of itself, and under its ancient privilege returns a member to the Assembly, the sole indweller of the town, ✝ (who owns besides the greatest part of the lands adjacent), self-electing and self-elected.

On the south side of the river the banks rise not until some distance from the present channel, and it could easily be made out what had been the several limits of the river-bed, originally very wide; indeed, this gradation of channel may be observed in most of the rivers of this region. On ascending the rise towards the upper sand-flats, a shell-bank was remarked, beneath a covering of sandy clay and sand. The clay-bed was distinct, in color and horizontal direction.

The land lying next the rivers and creeks is the dearest, and fetches 4-5-6 pounds the acre Virginia Current;* not only because the soil is richest there and most productive, and the situation more advantageous for trade, but because those who are careless husbandmen may find an easy support by the profitable taking of fish, oysters, and crabs. The land lying at a distance from the streams, higher, dryer, sandy, and worse, descends in value to as little as 10 and 5 shillings. The high, sandy land is, to be sure, not the most fertile, but very little trouble is taken to give it any improvement, even were there enough working hands; for the American expects everything of Nature and cares not to forestall her. I was told of a man who has an extensive property on this side the river, and many hundreds of negroes, who nevertheless find it difficult to raise enough for themselves and their master. The

* The value of land in this region is comparatively not so high as in the mountain districts. In the counties of Frederick, Berkley, Shanandoah, Augusta &c., even 12 years ago, an acre of the best land could be bought for 2-3 pounds, but now for not less than 6-8-10 pounds. That region has been long settled and is more thickly populated than the fore-country.

land, indeed, is sandy and thin; the negroes lazy and thievish, the head of the family careless and easy; and no thought is given to means of betterment and a sagacious use of many natural advantages, whether because not the custom or in appearance somewhat tedious.

In these lower parts of Virginia little or no hay is made; the dry sandy soil does not bring it willingly, and they do not understand how to make use of their marshes. Their horses, and such cows as are kept about the house for milking, are fed on corn-fodder, as long as the store lasts; and afterwards must shift for themselves. Wheat, pease, and other straw is cast out as useless; during the war, when Pensylvania and Maryland teamsters came by with the army, the people of this region made the important and new dicovery that horses eat **small-cut straw,** and I was asked in all seriousness whether our German horses condescend to this sort of feed. Swine and cattle multiply prodigiously, but there is so little attention given to their keep that besides what is fattened and salted for family use or for sale, many head of cattle perish for lack of suitable feed, given over to their fate in the woods and swamps, where often there is abundant nourishment to be had, (and quite as often very meagre), but the main dependence must be reeds and sedge throughout the winter. The whole compass of the Virginian husbandry consists in, first, raising a good supply of maize for the planter's family, his negroes, and his cattle; then, tobacco and a little wheat for keeping up appearances; and, for the rest of the year, doing nothing at all. If the corn crop fails, those who own many negroes suffer great loss, or it may be, are in want

in the spring of the year, having spent their substance for drink while the winter was on. Should the price of tobacco rise, everything else rises as well, corn, hogs, &c., desire of gain tempting the planter to use most of his land and labor for tobacco, neglecting the necessaries.

Five miles from James River we passed Surry Court-House, whither a great crowd of people was hastening, (all of them mounted), because it was court-day. Not far off, at a mill, there lay exposed another shell-bank, beneath a deep bed of reddish sand, in which the clay stratum was horizontal. To Nelson's Ordinary (11 miles), and beyond (10 miles) to Smithfield, or Isle of Wight Court-house, the road lies through a tract of pine-woods; plantations of good appearance were to be seen here and there, but very few; however, we saw more churches on this road from Williamsburg to Smithfield than in any other day's journey in America, five, that is to say, including the two at those places; the other three stood alone in the forest.

Smithfield is a small place on the high bank of the Pequia creek, which runs a devious course through these flat regions to James River. Here at one time stood an Indian village, Capahowosick, which, together with the lands adjacent, was presented by Powhattan, a great Sachem of the Virginia Indians, to the forementioned Captain Smith, by reason of the tender love cherished by Powhattan's daughter, the beautiful Pokahunta, for that Englishman. From this Pokahunta descend two esteemed Virginia families, the Randolphs and Bollings, who still possess considerable estates on the Appamatox inherited from her, where

also a little town by the name of Pokahunta perpetuates the memory of the princess. The coast is nearer here, and one has passed the tobacco-country proper, the plant not thriving on the poorer, sandy soils of the region, but tobacco is brought hither from more distant parts; on the other hand, the extensive pine-forests supply a different sort of produce, namely, tar, pitch, and turpentine, which with salted hog-meat are the most important articles for export of this place. A barrel of tar, 31½ gallons, costs at this time 8-9 Virg. shillings; a barrel of turpentine 18 shillings, and a barrel of salted hog-meat, 220 pounds, 50 shillings.

At Smithfield we passed the evening in the agreeable society of some gentlemen of the neighborhood. The talk most of the time was of the great advantages which the Virginia state has over all other states in all the world, and the nation of Virginia over all other nations. It was insisted that the **noble Virginians** are the 'most polished nation' on God's earth, the gentlemen of France perhaps alone excepted. Sufficient proof was lacking for there was no one to contradict or interrupt the series of conclusions by which the affirmation was as naturally supported as that made by the little Frenchman: that he was the handsomest man under the moon. From the undeniable argument, that in fertility, size, navigable streams &c. Virginia is superior to the other American states, a number of propositions followed to substantiate the claim that in every respect Virginia is in advance of all other states, all other parts of the world. Who in America would dare count himself the equal of the noble Virginian? The poor New Englander who gains his bread in the sweat of his brow? or the Pensylvanian,

who drudges like a negro and takes butter and cheese to market? or the North Carolina pitch-boiler? or the South Carolinian with his everlasting rice? Above all these stands the Gentleman of Virginia, for he alone has the finest horses, the finest dogs, the most negroes, the most land, speaks the best English, makes the most elegant bow, has the easy grace of a man of the world, and is a baron on his estates, which yield him everything and could yield still more! What country, what nation in Europe can boast of such advantages as those of Virginia?—Spain, perhaps, superstitious and slavish? or tyrannical Great Britain? or groaning Italy, under yoke and ban? or the soul-selling Germany? The remaining barbaric northern nations, with their frigid lands, (as little known as these) were all passed in review and reckoned out of the account. In evidence of an inborn higher morality it was brought out that during the last, seven years' war, when neither civil nor religious laws were adequately effective, no Virginian had been guilty of murder;* for the shooting done by their army in the high grass or creeping about in the bush on their stomachs so as to surprise and kill British soldiers, alone, unarmed and off their guard, this they do not call murder. The great-mindedness of the Virginians was mentioned, but they did not speak of the

* The New Englanders, as also the Pensylvania Germans, boast in a somewhat similar way, the former that in a space of 21 years, and the latter, that for 17 years, no one among them has been guilty of death-penalty or has suffered it. This is regarded as proof of the better and more careful upbringing of the young which the Presbyterian New Englanders and the German Lutherans give their children on religious principles, and is ascribed also to their custom of putting children earlier to work. But it may well be said of all America that the

cases, not rare, of mulattoes out of negresses by gentlemen, who then sell their own children to others as slaves. The hospitality of Virginia was boasted of, but it was admitted that for fear of the small-pox, or on the ground of other suspicions, their doors were oftentimes closed on strangers; and indeed their much-praised hospitality is by no means unrestricted, but is confined to acquaintances and those who are recommended. It seemed to be a contradiction when Mr. Whitefield, our host, (still defending the hospitality of his countrymen generally), confessed that travellers often had to go 20 miles and more to reach his house, after having knocked in vain at other doors. But it appeared still more contradictory when this self-exalting company began to describe the rude American Indians, giving as the plainest proof of their barbarick ideas that the proud Indians, belittling all other nations, compared the whites, with no exception of the noble Virginians, to white dogs' dung.

I have by no means put down all, and have added no word to what was really brought forward in this evening's conversation; but more would hardly have been needed to confirm the observation which has generally been made regarding the character of the Virginians. "The Virginians are a cheerful, hospitable, and on the

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death-penalty is very rare, the cause of which is not only the better rearing, which one part of the country boasts of in contrast to another, but is to be found as well in the milder administration of justice, and particularly in the ease with which every man may earn an honorable living by agriculture, peaceably supporting himself and his family.—On Nantucket, since the building of the town, that is, for more than a hundred years, no one of the inhabitants has forfeited his life to the law.

" whole a mannerly people; some of them have been " taken to task for overmuch vanity and rodomontade, " and this reproach is not altogether without reason," says Guthrie ✚—and the same is to be found in Burnaby and other travellers, who all make use of the epithets, ' careless,' ' loitering about,' ' sociable,' ' caroussing,' ' proud,' ' jealous,' ' boasting,' ' haughty,' &c., when speaking of them. True it is, the gentlemen of property (and they are many) live on their estates careless and independent, if only they have paid their taxes and can balance outgo and income. If no impulse to political affairs rouses them from their inactivity, they spend their days in idleness or in such pleasures as a country-life affords. For if they do perhaps comfortably oversee the sluggish work of their slaves, that cannot be called work or effort. They pass the greatest part of the summer on soft pallets, ✚ attended by one or several negroes to ward off the flies, light pipes, and proffer punch, sangry, toddy, or julap. But one should not blame them hastily but consider, that the majority of men everywhere, were there not other conditions and stimuli to prevent, would allow themselves the same indulgences, if tempted by a climate inviting to ease and offering an abundant support. Self-content, the Virginian avoids all efforts of mind and body involving anything beyond his pleasure. He reads, but he does not study so as to make a display of learning, possessing which, no title, rank, or lucrative office would compensate him for his midnight toils. A residence at lonesome country-seats is favorable to the muses, if these do indeed withdraw from the uproar of cities and distracting surroundings, if they luxuriate, philosophically calm, in the treasures of knowledge

elsewhere assembled, and so bring about production. Such a life is unfavorable for kindling in young minds a love for science, enthusiasm, and the spirit of emulation. Thus the young people of Virginia follow after their fathers, relations, and neighbors, and grow up without much literary instruction, which they either have small occasion for or hold to be superfluous. A Virginia youth of 15 years is already such a man as he will be at twice that age. At 15, his father gives him a horse and a negro, with which he riots about the country, attends every fox-hunt, horse-race, and cock-fight, and does nothing else whatever; a wife is his next and only care. A gentleman of Petersburg told me that he would be sending his son to Edinburgh to make a doctor of him, since he now doubted whether he would ever marry and take over a plantation, his age being already 21 years. However, one would be very unreasonable if unwilling to admit that the Virginians on all occasions show clear and penetrating powers of mind; only it is a pity that a taste for the sciences is not yet so general among them as among their neighbors farther north. Also it must be granted that the Virginians have a rather superior look; they are for the most part well-built, slender, and of an active figure, their faces well-modelled, and one seldom sees among them crippled or deformed people, those excepted who have been maimed in the war or by accident. ✝

Rainy weather prevented our leaving Smithfield the next forenoon; but we were unwilling to tarry longer here, although we could scarcely reach the nearest tavern, 20 miles off, without running the risk as night fell, of going astray in the eternal woods. We were

told of a 'mighty hospitable man' living on the road; and yesterday's praise of Virginia hospitality still resounding in our ears, we were willing to try our fortune, rode 12 long miles through sand, marsh, and forest to an arm of Nansemond Creek, and asked politely for a night's lodging at the house recommended. It was dark, a dismal, cheerless Christmas Eve. After repeated inquiries as to where we had come from, who had sent us, &c.; after as many reminders that this was no public house, but travellers (who withstood repulse) were taken in gratis; and after prolonged counsel between man and wife, we were at last received, with an ill grace. The next morning we took leave early and expeditiously. Not far from the house we passed Everit's Bridge, named for our host, who had built it by authority from the Assembly so as to bring the road, which lay in a different direction, before his house and store. Although he expected and got advantage from this change in the road, he considered it no business of his to look after the comfort of travellers.

Suffolk, on another small branch of Nansemond Creek, was the next little town, 20 miles from Smithfield and somewhat larger than that place. The town formerly drove a good trade in pitch, tar, timber, and other products of this part of Virginia and the neighboring North Carolina, of which the boundary line is only 22 miles from here. Of the 100 low frame houses the place had, but few are now standing; the others were burned in May 1779 by a party of British troops which made an expedition from New York to Virginia, and finding no opposition, returned with a rich booty in tobacco &c. The fine and deep sand in the streets is

very incommodious to foot-passengers; stones are not to be had, for paving; and in order to get a little firm ground before the houses they mix with the sand a sufficient quantity of pitch and tar, and let it harden. The Nansemond is navigable for small vessels as far as this; a dilapidated wooden bridge and shallow water prevent them going higher; a mile above it is possible to wade the stream, which with its other branch falls into James River about Hampton Road. Most of the articles for export of these parts, tar, turpentine, pitch, lumber, salted meat &c. go to the West Indies, whence the shopkeepers and merchants here draw sugar, rum, coffee &c, turning these over very profitably in exchange for the foresaid articles of produce. This West Indian trade is carried on in small vessels, shalops of 20-30-50 tons, and consequently no great capital is necessary, the way being short, the fitting-out not expensive, and commonly no more than 2 or 3 negroes, with one white man, being aboard. Salt, in these times of slaughter, is indispensable and forms a considerable article of trade, used in the preparation of a domestic store of meat for winter, and in making ready that intended for export. When the ships that bring it from Toriola, Turk's Island, and other of the West Indies, are past due, the price rises 3 and 4-fold, to the great advantage of those shopkeepers who have a supply. During the war, when shipping was so uncertain, and great inconvenience was felt for lack of salt, the attempt was made to prepare it on the sea-coast, but the experiments in ponding the sea-water and letting it crystallize did not turn out well on this coast below the 36 and 37 degree of latitude, although in Europe there are good results under the 46 and 47th

parallel. If the weather was not very unfavorable, or the management very unskilful, no other cause for the ill success of these attempts can be given, except the many large streams which make the water of the ocean less salty along the coast.

From York in Virginia to this place, and still farther, it was to be clearly remarked that the southern banks of all rivers and creeks passed by us were higher, or rather steeper and rougher, than the opposite northern banks, which are invariably of longer slopes and more washed; for it cannot be said that the sand-flats generally through which these streams flow are disproportioned. May this be the effect of the storms, coming more frequently from the North, North-east, or North-west, and making a greater impression on the side from whence they come? This is chiefly observable where the creeks make a considerable bend.

Thirty miles from Suffolk, on the Elizabeth River and near to its outlet in Chesapeak Bay, there stand on either side the stream the towns **Portsmouth** and **Norfolk.** The latter was at one time not only a very handsome, but a very populous place, to which much business was brought owing to its advantageous situation at the mouth of the Bay;* but the whole place, soon after the beginning of the disturbance, was laid

* It is remarkable that the tide rises scarcely 2 feet at the mouth of the Chesapeak, whereas at the mouth of the Delaware it rises nearly 7 feet. If it is remembered that a similar mass of water is driven against both, there is then less resistance in Chesapeak Bay and more space for distribution than at the mouth of the Delaware river, where damming must take place. Thus there is a higher flood-tide at the mouth of the Potowmack than at the mouth of the Chesapeak.

in ashes. Portsmouth suffered the same fate, in part. But both places have hopes of coming up; it will be some time, however, before Norfolk gathers again the 6000 inhabitants it is said to have had, including the blacks, trade having meantime been diverted to other channels. These towns lay out of our road, and I mentioned them because of their neighborhood, they having besides become well known from the history of the war.

A famous region, by which the road from Suffolk to Cunningham's passes, is the **Dismal Swamp**, also called the Great Dismal Swamp to distinguish it from the Alligator Dismal Swamp which lies not far away in North Carolina, between the Albemarle and the Pemtikoe Sound. This swamp is between Norfolk and Suffolk, Edenton (which is 60 miles from Suffolk), and the sea-coast, and is a thick, boggy, impenetrable wilderness, in length 40-50 miles from north to south, and 20-25 miles wide. In it are found most of the North American beasts of prey and other wild animals, bears, wolves, the tiger of these parts (*Felis concolor Schreb.*), the lynx, opossums, raccoons, foxes, squirrels, and who knows what besides—for few people venture in, and fewer still know anything of what is there except by hearsay. Serpents are rare in this and other marshy regions. While the British garrisons were yet at Norfolk and Portsmouth, the Americans cut a foot-path through a part of this swamp, to make a more secluded road for spies; that is to say, trees were felled one before the other, over which the passenger must spring and climb; whoever slipped his footing, sank up to the neck in water and deep, fat mire. However, small spots are to be found here and

there which are always dry, and these have often been used as places of safety by runaway slaves, who have lived many years in the swamp, despite all the snares set for them by their masters, even if planters living near-by, for they are chary of going in. So these negro fugitives lived in security and plenty, building themselves cabins, planting corn, raising hogs and fowls which they stole from their neighbors, and naturally the hunting was free where they were. In the midst of this wilderness there is a great pond of fresh water, said to be several miles in circumference and 2-3 fathoms deep. A company which under the name of the Swamp Company owns the greatest part of the lands adjoining the swamp and most of the swamp itself, had begun to make the bog tillable, chiefly for rice-culture for which the region is especially well suited. The war breaking out their enterprise came to a stand (most of the negroes set at work there running off or getting lost in some way), but the work would have had very beneficial effects, removing in part the dreadful cause of great sickness in the country round about, and besides the very profitable culture of rice would have opened a new branch of trade. + Great numbers of cattle are raised in the surrounding country, and the meat of the region is said to be better than elsewhere, the cattle not pasturing on dry sandy soil but feeding on sedge and reeds. Along the side of the swamp where we passed, nothing in comparison with the interior, our way was not smooth, the roads full of mire and water through which our horses pushed not without difficulty.

To the account of this and other swamps must without doubt be laid the numerous fevers which weaken

the inhabitants of the country adjacent and give them their cheerless, pale faces. Not long ago, according to what the people said, a nervous fever had caused a terrible devastation among the blacks and the other inhabitants as well. The disease began with an extraordinary weakness, accompanied by pains in the head and back, and was often fatal within the first 12-24 hours. Those people who live on dry sandy soils, at a distance from streams and swamps, are commonly more healthy, but even they are subject to autumn sicknesses which are general almost throughout the coast country. For the rest, the Virginians live pretty regularly, take much exercise by riding, are temperate in eating, and even in drink are not universally excessive. Their domestic drinks are a sour, half-flat, cloudy cyder, persimon beer, apple and peach whiskey; in lower Virginia as yet few or no attempts have been made to brew beer in the regular way.

North Carolina.

A straight line, under 37° 37′ north latitude, from the Atlantic Ocean to the Mississippi, or from the 76th to the 90th degree of west longitude, divides Virginia from North Carolina. This boundary line has only very recently been surveyed and fixed for the region to the west. + The length of the state of North Carolina from east to west amounts thus to 720 miles; its breadth, on the other hand, from the Virginia to the South Carolina line, or from the above mentioned north latitude to about 35° north latitude, reaches only some 110 miles. But the boundary between North and South Carolina, particularly its western part, has not yet been settled, and is a matter of more or less dispute.

At a recent adjustment of the boundary line between Virginia and North Carolina, it was found that the line struck immediately behind the house of a man living on this road, dividing his lands so that half lay in one state and half in the other. His dwelling-house stood on the Virginia side; and it occurred to him to build a new kitchen on the North Carolina side, so placed that the roof-tree should lie along the boundary. He desired to have the pleasure of being able to say that he ate his meals every day in Virginia which had been prepared for him in North Carolina.

To the view, the landscape is quite the same, all sand-flats and pine-forest as before; however, a few

more oaks are all at once observable. The country travelled through from Virginia, as well as that traversed before and what follows, must be imagined as a continuous, measureless forest, an ocean of trees, in which only here and there cultivated spots, what are called plantations, of more or less extent are to be seen. In the midst of the fields stands commonly a house, better or worse; the kitchen and other mean out-buildings are at a distance. In Virginia, on the tobacco-plantations, the shelters for hanging and drying the tobacco stand somewhat farther off from the house, as in South Carolina those used in the preparation of indigo. Neither plant being raised as yet in this part of North Carolina, one misses these subsidiary buildings, and there is nothing to see but a few cabins for negroes and store-houses, which in outward appearance are seldom much inferior to the dwelling-house of the master. One comes upon such plantations scattered about in these woods at various distances, 3-6 miles, and often as much as 10-15-20 miles apart.

But it is the forests which supply the present inhabitants of North Carolina not merely an occupation and a support, but the means as well of an easier life and often considerable estates. For the products of these pine-woods as such, the convenience and small expence of keeping numerous cattle in them, and the pretty abundant stock of game even now, these have for long formed the most important items in the export trade of the province, carried on chiefly with the West Indies, where there is a near and ready market.

Through such a lonesome country, then, had we to go from Suffolk to Edenton, 68 miles, or from the

boundary line 44. The tedium of the monotonous woods and the dead winter-season was broken but seldom by new objects, by no means peculiar to this province, (since most of its natural productions are common either to Virginia or South Carolina), but offering for observation somewhat more frequently.

The Buzzard (*Vultur Aura L.*)* is, in the southern provinces of America, a very common bird. It is the size of a wild turkey, to which at a distance it is not dissimilar in figure and color, so that new-comers have often taken the one for the other. The color of the body is a blackish brown; the bare and wrinkled forehead, and the nib, as far as the point, are red. The eyes large, active, and brownish; before each eye is a large, white callosity set with short bristles. The long-cut nostrils stand wide open on both sides, and are not divided; the pituitous skin of the nose is reddish, very much folded, thick, and soft. From this distinct structure of the organ of smell, the assertion that the buzzard can scent carrion many miles, although not proved is made likely enough. The tongue is furrowed; its edge and the palate indented backwards. Legs, feet, and talons are not so strong and muscular as with others of the genus which take their prey alive. The buzzard has no need of strength, nature having assigned it dead bodies only, and it never or very rarely ventures against living animals. It is content with filth and carrion, the smell of which would otherwise, in so warm a climate, be injurious. For this reason the bird is nowhere molested, and is suffered to go unharmed even in populous towns; it is forbidden by law

* *Buteo specie gallopavonis.* Catesby, *Carol.* I. tab. 6.

to kill it, and hence the buzzard is not coy. But if wounded or deprived of its liberty, it manifests fear and does not resist if handled; however, there is no temptation to come near, since its atmosphere has an odor of carrion, and its mouth is always full of regurgitated filth, which it seems to bring up out of fear or distress. It is said they leave untouched the dead bodies of men. They breed in holes in the rocks and in hollow trees. In the woods they roost on the branches of trees, and often one sees them together in great numbers. The breadth of a pinion is commonly from 5 and a half to 6 feet. We observed these birds first along the James River; it does not appear that they are found much farther north, but towards the south they grow everywhere more numerous and are met with in flocks.

Of passage-birds which at the onset of winter desert the northern and middle provinces, some tarry in this rather more temperate country; others continue farther towards the south. Even wild ducks winter here, and most of the water-fowls which in the spring and summer are to be found on the northern lakes and rivers. A sort of swan was mentioned, similar to the European and said to frequent these rivers; none was seen by me. Wild turkeys are not only numerous here, but of a good weight.

The European bee, in most of the forests of America but especially in the southern, has become almost native. The bee was formerly not known to the Americans who call it the European fly. It has rapidly increased, what with the many hollow trees, and the favorable climate furnishing rich pasture. But little honey is gathered; the bears nose it out with

their fine sense of smell, clambering up such trees for the store—if hunters wandering about the woods remark this, they commonly take the skin of the bear and the honey discovered by him.

People working in these forests during the summer find the wood-louse (Ticks, Seed-ticks, *Acarus americanus L.*) a great plague, at many times and places very numerous. Their bite causes great pain and wicked boils; with their proboscis they bore deep into the skin, and when they have become fast lodged, must be quite probed out, if possible. During my time in the northern provinces, little was heard of this pest, but according to Kalm it was abundantly felt there in the years 1748, 1749, and 1750, more so indeed than ever before.

James River passed, the parasitical plant commonly called moss grew more and more frequent, and often the largest trees were almost covered with it. This strange plant at first sight appears very similar to hanging garlands; it consists of thin, soft, woolly-white, branching threads, which pend one to two or more feet from the trunks and branches of trees. It is the *Tillandsia usneoides L.* It is seen vastly oftener on oaks and other deciduous trees than on pines; and oftener and more luxuriant on dead trees than on living. Whether the plant prefers dead trees, thriving better there, or whether its encroaching growth kills the tree, I will not decide. If the outer, woolly covering is stripped off, (more easily done with the dry plant), black, pliant, strong threads are obtained, which make good material for mattrasses, cushions &c, and the entire plant is very serviceable for packing breakable wares. The fresh plant has an insipid,

rather sourish taste. Horses do not eat it willingly; horned cattle tolerate it in winter, from hunger and lack of something better; and in order to supply the cattle keeping in the woods with this nourishment, the people fell here and there such trees as are most abundantly laden.

In the swamps, on the banks of the rivers, and in other low spots that are overflowed, there flourish everywhere an exceeding great quantity of canes or reeds. The younger leaves and tender shoots of these supply the cattle let run in the woods with the chief part of their winter food. Thus the raising of cattle is made extraordinarily easy to the planter, who has little to spend on their keep until they are ready for fattening. These canes are hardly found north of the James and York rivers, but to the west, even beyond the mountains, they are everywhere plentiful in such places. They shoot up in close thickets, the canes sending up sprigs or joints 8-10 inches long, and measuring 1-2 inches through near the ground. Generally they are from 3 to 12 feet high, but now and then much higher. I have seen no blooms, and therefore do not venture to say to what species * they belong.

Most of the North American indigenous wild animals are still to be found in these extensive and thinly settled woods of the fore-country of North Carolina. Wolves, bears, wild cats, the brown tyger or cuguar, as well as the bison and the original, are often met with in North and South Carolina even far to the east of the mountains, whither they have been frightened

* Probably *Zizania aquatica L.*

from the northern provinces by the greater number of the inhabitants there. The Virginia deer, commonly called the deer, (*Cervus virginianus*), of which I have already made mention repeatedly, still ranges in these parts in large herds. Now and again we saw many of them pasturing together quite unconcerned. Their size is a little less than that of our fallow deer. In color they are throughout pale yellow or a very light brown; but in very young animals the fallow verges sharply into grey, flecked with white. But they are taller and longer legged than the fallow deer, and spring with backs bent. The horns are round at the insertion, and only towards the ends a little flattened or not at all; bent outward towards the forehead and set with divers extremities. The export of their skins is a considerable item yearly in this province. A proof of the number of these animals is that one man on the New river has been able to shoot 175 head since the spring of this year, and simply for their pelts. If one cannot or will not shoot for himself, the game may be bought commonly for one or at most two Spanish dollars the head, which always gives more than a hundredweight of venison.

With the most careless handling domestic cattle have increased with the greatest rapidity. It is nothing uncommon for one man to own 100 or more head of horned cattle; some count their herds by the thousand, all running loose in the woods and swamps. By penning up the calves, and throwing out a little corn every day to the dams, the milch cows have been accustomed to come up to the dwelling-house from time to time to be milked. For each farm, the black cattle, sheep, and hogs are distinguished by special ear-

marks; horses are branded. Each planter's own peculiar mark is registered by law, and is thus a legitimate proof of ownership, and extinguishment or falsification of these marks is treated as felony. There is little beef salted for export; what is salted is said not to keep well, and to grow hard and lank. In general, the beef is of no especial goodness in any of the provinces south of Pensylvania and Maryland; the cattle themselves small and thin. But live cattle are exported to the West Indies from the coast country, and large herds are driven up from the farther regions to Pensylvania, and there fed for the Philadelphia market. Out of the woods and thin as they are, one head with another is sold to the cattle-handlers at 3 to 6 Spanish dollars; and to the owner, who has been at so little trouble and expence, this is almost clear gain. Their hogs likewise range throughout the year in the woods. ✚ Towards the coast in the pine forests, the cones of the pitch-pine, larger than those of the other sorts, are their favorite food; also they root up the young sprouts of these pines and eat off the bark, for which reason the pitch-pine does not spring up so readily where it has once been taken off. Farther up the country the hogs find better mast beneath the numerous oaks, chesnuts, beech-trees, and chinquapins. In winter the sows make themselves beds of pine-twigs where they litter; the owner seeks them out, brings them in nearer the house, gives them a better bed of straw, and marks the pigs. Later, to accustom them to the plantation, they are called up several times a day and fed on corn-stalks. In the autumn, after the maize-harvest, a number of hogs are brought in from the woods and placed on feed. A

bushel of corn a week is allowed each head, for 5-6 weeks. The amount of corn made determines the number of hogs to be fed. Fattened hogs reach 3 to 500 pounds' weight. Live hogs sell at 3-3½ Spanish dollars the hundred. Nowhere on the whole continent is the breeding of swine so considerable or so profitable as in North Carolina. Besides what is consumed in the country, salted, exported, and lost in the woods, there are annually 10-12000 head driven to South Carolina or to Virginia. The North Carolinians therefore should not look a-skance, if their neighbors rally them for being pork-makers, for when the talk gets on their swine-breeding they themselves use the expression, 'We make pork.' But in these circumstances, a hog costing them next to nothing except for what goes into the fattening, the North Carolinians can send their salted hog-meat to market at a third or a half cheaper than their neighbors in the northern states where harder winters and more restricted pasturage make the maintenance dearer. On the other hand, there is a difference in the quality, for the bacon of the Carolina hogs is softer and does not keep so well. But it is not very long since this part of the cattle trade has been much followed—and doubtless it will be found to their interest to make betterments.

Such a quantity of neat cattle, horses, and hogs ranging about in the woods, many get from under the eye of the owners, are either not marked, or run off and are chased by predatory beasts into regions where the marks are not known, or multiply in unsettled parts of the country. All such cattle are called wild, and are no man's property except his on whose land they are found. But in certain parts there is a 'woods-

right' so-called, according to which every plantation has a fixed share of all wild herds thereabouts; and this right, like any other property, can be transferred or sold at will. Their hogs are especially apt to grow wild, not answering calls and difficult to bring tame again. But I could not precisely discover whether these wild hogs and their progeny become like the European wild hogs.

Edenton was the first town we came to in North Carolina, and it is none of the worst, although consisting of not more than 100 framed houses, all standing apart and surrounded with galleries or piazzas. The place was once for a considerable time the capital of this province, and stands on the north side of Albemarle Sound, which is here 13 miles wide and has always been a furtherance to the trade of the town, notwithstanding the harbor is very ordinary and shipping in the entire Sound extremely difficult and tedious. The road which ships must take coming in from the sea by the navigable and best channels is as much as 180 miles long, although the town itself is not more than 35-40 miles from the sea in a direct line. There would be a shorter passage if the Roanoke and other inlets were navigable for vessels even of a moderate tonnage. Coming in, vessels must first pass the Occacock Bar, where at high tide there is no more than 13 ft. water; and then there lies in the way another bank, 2-3 miles wide, called the Swash, consisting of firm sand, and at the highest tide giving a depth of only 9 ft. Ships, therefore, often take 8-12 days entering and clearing the Sound, at times must wait months for a favorable opportunity, and then are subject to the very great inconvenience of lading and

unlading at a distance from the town by means of lighters. And when at last a ship is freighted and past all obstacles, shortly after getting into the ocean the Gulf Stream must be contended with, which in this latitude approaches very near the main-land. In this way various circumstances unite to hamper shipping and make it difficult, but these notwithstanding are overcome by patience in times of peace, and during a war are made use of to the positive advantage of the place. By reason of this especial and unfavorable situation of the place, during the last war the trade here grew uncommonly active and flourishing. It was certain that no hostile vessels of any size could venture over the Bar and the Swash. Thus most of the American trading ships took refuge here, where they could take in or put off cargoes in security; Philadelphia merchants established themselves here; the Virginians brought hither their tobacco by land-carriage, taking in exchange West Indian or other wares, which at that time were over-plentiful here. With this stimulus to trade, Edenton found itself in such good circumstance that the inhabitants wished peace away, which made their town be again deserted. At the time there were lying in the harbor but three ships, top-sail vessels, and in good condition, but many large and small craft were there which at the outbreak of the war had run in here and were now half gone to pieces. The worm does little damage here, the water being only brackish. It will be odds whether, without especial and serious attention on the part of the government, Edenton will ever come again into the trade it once had, for it appears that most of the vessels entering the Sound pass by the town and go immediately to Hallifax and other

small places lying on the rivers emptying into this Sound.

It was hoped, but in vain, that Lord Cornwallis on his march through North Carolina might come to Edenton, which he at one time seemed to be approaching. It would indeed have been an easy matter to lock him up here, because on the land side, what with the numerous swamps and creeks, there is only one practicable road for an army destined for Virginia, and for crossing the Sound a great number of small boats would have been necessary, since no large armed vessels could have been used; in either case the loss of the army would have been inevitable. But Lord Cornwallis knew the country quite as well as his enemies, at that time fleeing before him.

At Edenton we were for the first time regaled with the domestic tea universally known and beloved in North Carolina. This is made from the leaves of the *Ilex Cassine L.*, a tolerably high and beautiful tree or shrub, which growing abundantly in this sandy country is very ornamental with its evergreen leaves and red berries; more to the north and even farther inland it is rare. It is here generally called **Japan,** but has this name in common with the South-Sea tea-tree (*Cassine Peragua L.*), which likewise grows on the Carolina coast, and is also greatly esteemed for tea. The people here have a very high opinion of the good qualities of the Japan; they not only make use of it for breakfast instead of the common Bohea, but in almost every kind of sickness as well. Near to the coast, where the drinking-water is not altogether pure, it is pretty generally the custom to boil the water with these leaves. Such an infusion is not unpleasant, if it

is properly managed. There are those who in a slovenly manner chop up the fresh leaves, the twigs, the wood, and the bark all together; but this gives the water a repulsive taste. More careful housekeepers have the leaves, which may be gathered at any season of the year, culled out in a cleanly way, and dried in an iron kettle over a slow fire; they pound them a little in a mortar, so as to keep them the better in glass bottles, but before putting them up they let them evaporate a while in the air. Prepared thus, the taste betters by keeping, and not seldom a pound fetches one to one and a half Spanish dollars. It is claimed here that at one time this Japan-tea began to be much liked in England, a pound bringing readily half a guinea; but importing was forbidden, lest the sale of the Chinese tea should be diminished.

All the good qualities of this tea, praised as they are, cannot however prevent the sickliness of the inhabitants, especially prevalent in the low, overflowed, and swampy parts of this country, and giving the people a pale, decayed, and prematurely old look. This is the case not only about Edenton, but along the entire low-lying coast, which this fall, from Virginia to South Carolina, was visited with numerous fevers. Only those living scattered in the deeper and dryer forests,* and farther from large swamps, enjoyed at that time (and commonly do enjoy) a somewhat more unshaken state of health. The people themselves are apt to as-

* But according to Director Achard's ✝ experiments, (*Chem. Annal.* 1786, 8, 108), the air of dry places, distant from marshes, is not precisely the best.—Thus, for the more exact explanation of the above remarks other circumstances and causes are to be sought out, local and at the time unknown.

cribe their better condition of health to the beneficent effect of the pitch and tar odors they are almost constantly inhaling, and they set particular store by the volatile, balsamic exhalations from their pine-woods; just as many take it to be an established fact that standing water among pines, on account of the properties communicated by the rich heart-wood, is less subject to pollution and gives off exhalations less unhealthful. However, it appears that where large swamps are near by, the pitch and tar atmosphere is not a protection generally against fevers and other autumn sickness. At the same time, it is confirmed by experience that swamps, so long as they are occupied by trees and bush, are less injurious to the health of people living round about than if naturally bare of such growth, or when the fertile marshy soil is cleared up for cultivation. The well known air-improving property of plants makes this explicable and was the ground of Dr. Franklin's advice that the forests in Virginia and Carolina should be cut off with circumspection, way being given for the air to dry the rich marsh land, but sufficient vegetation being left for the purification of the air. Over the low, exposed, half-dry swamps which almost encompass Albemarle Sound, the unstirred hot air must all the more rapidly grow corrupt, because ebb and flow are very insignificant here, and the cool winds which elsewhere accompany these movements of the water are very largely absent. In addition to the usual bilious and intermittent fevers, there prevailed last fall a bad form of quinsy, which carried off many people in these parts. In so small a place as Edenton there were 9 bodies to be buried in one day. The people here are too much

given to a belief that there is no way of avoiding frequent sickness, and consequently they take little trouble to be rid of their plagues, regarding it as matter of fact that no physician can cure their 'fever and ague.' They try a few doses of quinquina, and if this does not help they give themselves up to the fever, hoping that with the approach of winter they will grow sound. It is remarkable that among the multitude of fevers, the quartan should be extremely rare.

We lived in the same house with a doctor who, like many country-doctors in America, had all his medicines exposed in the window; his store was very restricted, little besides tartar-emetick, flowers of antimony, tartar, saltpetre, Peruvian bark, and a few other mixtures of sorts. He complained of slow and small pay. As yet there are no medical regulations in America, and if any one thinks his doctor's charge too high it is the custom to submit the matter to some neighboring practicioner, or to several of them, who allow or reduce the amount according to the circumstances or the degree of friendship or spite they have for their colleague. But if injustice is done, the charge can be very easily made good by an affidavit.

In Virginia as well as in Carolina there are in most of the houses hand-mills by which the maize, for the beloved homany, is ground small by the negroes. The mill-stones used are for the most part shell-stones, and having to be of a sufficient hardness are obtained only in certain places. Those used here come mainly from a place this side the falls of the Roanoke; at first sight they seem not at all adapted for the purpose, the shells weathered out having left large holes and flaws; but the stones are hard and firm, the shells bound together

by a fine sand-cement, in some places effervescing under acids and in others striking fire on steel. Millstones such as these last 20 years and more without whetting, which would besides be superfluous, on account of the great unevenness due to the holes. They are light, and therefore well suited for hand-mills, the construction of which is very simple, as might be expected in an American apparatus. The mill consists of a hollowed block, about 3 foot high and 2 in diameter, in which the nether stone lies fixed, the upper, even with the edge of the block, moving on an iron spindle-tree fixed in the stone beneath, and adjustable high or low by a wedge, according as the grinding is to be coarse or fine. A pole 4-5 ft. long, shod with iron at the lower end, is fixed at the top in a piece of timber made fast above the mill; the lower end being gripped to the upper stone by a hole in the edge, a negro briskly turns it about, and grinds several bushels of corn a day. A pair of these stones costs 5-6 Spanish dollars. Horse-mills are set up here and there with larger stones, but the construction is almost as simple.

Full four days we stayed at Edenton waiting to be set over Albemarle Sound: the trouble was not wind and weather, but the scurvy negligence of the man who by permission of a high authority keeps the ferry. He had allowed the negroes to go across the Sound with the boat for a holiday, not at all solicitous about travellers who might arrive in the mean time. No people can be so greedy after holidays as the whites and blacks here, and none with less reason, for at no time do they work so as to need a long rest. It is difficult to say which are the best creatures, the whites

here or their blacks, or which have been formed by the others; but in either case the example is bad. The white men are all the time complaining that the blacks will not work, and they themselves do nothing. The white men complain further that they cannot trust the faithless blacks, and they set them a dubious model. We lived at a regular tavern, where the legal charge *per* day for 3 persons and 3 horses was 5 Spanish dollars (12 fl. Rhenish), and for four long days we had nothing but old geese, suckling pigs, and raw salad, there being no vinegar to be had in the whole place. Here was much a-do about nothing; half a dozen negroes were running about the house all day, and nothing was attended to, unless one saw to it himself. Exterior courtesies increased with the latitude south; the negroes make low bows, partly from imitation, partly by order of their proud masters; the people in the northern parts require nothing of the sort of their negroes, they themselves having no such practices.

When at last on the fourth day the expected boat for ferrying-over the horses arrived, the next morning was fixed for the passage, and everything arranged; but although we had now a right to hope for prompt service for once, we found ourselves deceived again when we came to the water-side at 8 o'clock. The gentleman who kept the ferry was still sleeping quietly in bed; we had to rouse him up, and then wait until he had called together a dozen negroes who were to look for two others whose business it was to tend the boat, which they only now began to make ready; more time lost. I mention this vexatious delay of purpose, and should not forget to add that we had other similar experiences. Travellers therefore must have a good

supply of patience if they are not to be outdone at extreme carelessness which may often mean hindrance and loss to them, for there is no means of prevention or of compensation. To be sure, we were informed that we could bring action against the owner of the ferry for the loss of time and the expence involved, and might be certain of getting judgment; but we should have had to wait for a court-day, which was not worth the trouble.

In two hours we crossed the Sound, into which fall many larger and smaller streams, of which the most considerable are, the Roanoke, Chowan or Gouana (3 miles broad at the mouth, but not of a long course inland), Maherren, Blackwater, Nottoway, and others of less consequence, which all contribute to render the water of the Sound almost sweet. The Sound is connected with the ocean by divers inlets, but the mouths of these being all choked by bars * are navigable either not at all or for very small craft. Chief among the fore-mentioned streams is the Roanoke. It rises in the Blue Mountains in latitude 37, having several sources (the heads of Roanoke), and keeps a south-easterly direction. It is in that region that the Blue Mountains begin to be markedly lower, and at only a few miles' distance from the head-springs of the Roanoke, another stream, the New River, takes its rise, which has a course quite opposite to that of the Roanoke, flowing north-west and falling into the Ohio as the great Kanhawa. The Roanoke, at its entrance

* These sand-banks change position from time to time; the channel is often quite filled in so as to be crossed a-foot, but opens again after a space and gives free passage to larger or smaller vessels.

into Albemarle Sound is 5-6 miles wide; thence it is navigable for shalops to Hallifax, a small town but of an active trade. Eight miles above that town, the falls of the Roanoke prevent the farther passage of vessels; about the falls the river is wider than at Hallifax itself, and at one place plunges 15 ft. perpendicular. At one time the river shot over there with such force that one could pass dry beneath the water-arch made; but some time since a rock was loosened, and this natural curiosity spoiled. On the whole, the falls of the Roanoke are not of the splendor of those of James River, 100 miles away to the north. Not long ago a man came down in his canoe too near to the falls, was dashed over by the current and seen no more. ✝ However, fish attempt the leap, but if they fall short are flung against the rocks and fall dead below. In the spring towards the end of April or the beginning of May so vast a number of fish crowd together below the falls that in their confusion they do themselves injury and may be killed with sticks. Rock-bass especially come up the river in millions to spawn, and being checked at the falls spring and tumble so that the water foams with them. This commonly lasts for several days and is called the 'Rock-fight.' Fishermen take good advantage of the opportunity.

Above the falls, the bed of the stream widens, the river flows softly, and there is no obstacle to inland navigation until the mountains are reached, where the Little Yadkin and the Holston divide the waters of the stream. But little use is made of this navigation. Planters from the back parts prefer to haul their produce to James River where they find better markets.

Along the upper course of the Roanoke and its

tributaries, there are great tracts of the best land, garden-earth often to a depth of 6-8-10 feet. But even in the lower country there are extensive tracts of the richest soil along the rivers and creeks, and lying quite unused. People prefer the higher, dryer, poor land, because being without undergrowth, it is more easily brought into tilth and needs no ditches for draining. The bottoms would make most excellent meadow-lands, or under different treatment might be used for rice-culture, in which case every acre would fetch 5-6 guineas. For such enterprises the North Carolinians are as yet either not rich enough or too slothful.

The first settlers having laid down no meadows, the practice is followed to this day. And hence most of the farmers, although they keep a number of cattle in the woods, can hardly winter one milch cow at the house, are commonly at a stand for milk and butter, and must buy of the people farther inland, who keep fewer cattle than they themselves. In other places, along the rivers and coves, there are long stretches free of timber, and covered only with a rough swamp-grass. As is proved in like instances in the northern provinces, these might be easily brought into grass, did not the people here balk at the trouble, even persuading themselves that their cattle will not do on any other feed but what is to be had in the swamps and the thin woods-pastures. The milk of cows pasturing in the swamps is many times not palatable, and the bad taste disappears only after the cows have been fed for some days on corn and corn-fodder.

We landed on the south side of Albemarle Sound, at the mouth of a small river on the low banks of

which were assembled almost all the different and beautiful ever-green plants which before we had met with only here and there, and dispersed. The sight of such a splendid green coppice in the depth of winter, (it was the 31st of December), could not fail to be pleasing. These ever-greens are oftener to be found along the coast, where the weather on the whole is milder than farther inland. The most conspicuous of those we found together here were: *Ilex Aquifolium* (Holly). *Ilex Cassine* (Carolinian Holly or Japan). *Prinos glaber* (Winterberry). *Myrica cerifera* (Candleberry-Myrtle). *Laurus Borbonia* (Bay-tree). *Bignonia sempervirens?* (Yellow-Jasmine). *Smilax laurifolia*—and other varieties of this species, which however do not hold their leaves so well as this. *Prunus lusitanica* (Evergreen-Baytree). *Kalmia latifolia & angustifolia*—and divers *Andromedae,* which keep their leaves longer here than in the northern regions. *Hopea tinctoria*—used for dyeing yellow, the leaves are boiled half an hour, and the stuff soaked a quarter of an hour in the poured-off infusion, while hot; the color comes a fine straw-yellow; cotton takes it better than linen. *Juniperus virginiana* (Red Cedar). *Cupressus thyoides* (White Cedar), which often grows trunks 60-100 feet long, and 12-15 ft. in circumference at the butt. But they reach this extraordinary height only in fat swamp-land, and where they are protected by other trees against violent winds which their shallow roots do not easily withstand. *Pinus Taeda,* and other varieties of the species.

But besides these shrubs and trees, commending themselves to the eye by their enduring leaf, there are many others both useful and beautiful. *Cupressus*

disticha (Bald Cypress) is plentiful in these swamps. Its seeds fall at this time of the year; each scale of the seed-vessel has at the stud a little blister of fragrant, clear resin, of which no use is made. The wood is light and durable, and hence makes the best shingles and boards. *Callicarpa americana* (Sourbush) was still hanging full of its pale purple berries, which give a bright purple color to cotton stuffs. A splendid tree, very useful in ship-building, is the **Ever-green Oak,** *Quercus Phellos sempervirens;* Marshall, *Amer. Grove*—which begins to appear in this region, and grows continually more abundant towards the south. It is found also in the western country, on the Ohio and the Mississippi. Other commoner trees, seen here and everywhere, I need not mention. But the *Melia Azedarach,* the Bead or Paternoster tree, deserves notice. It is not indigenous, but thrives prodigiously and belongs among the rapid growing trees. They showed us one at Edenton, five years old and raised from the seed, which measured 9 inches in diameter and had made a shoot or sprig 11 ft. long, one year's growth. ✣

From the Sound we went 15 miles to Squire H——'s, who was a Justice of the Peace in his district. Of what dignity is a North Carolina Justice in these times the following incident will show, which happened immediately after our arrival. A young man who rode up after us, offered his hand to another whom he found here but it was not accepted, because the latter fancied the man had injured him on some former occasion. After a brief exchange of words there was a challenge, and both young men, laying aside their coats and shirts, hurriedly prepared them-

selves for a boxing-match, which took place on the spot, in front of the house and in the presence of the Justice of the Peace. Women, children, and blacks gathered around, the women exclaiming at the contempt shown for the officer's house. The Justice himself stepped forward with folded arms and tranquil demeanor, and once, twice, three times bade the combatants keep the peace. The boxers paid no attention, and the Justice having fulfilled his duty by thrice commanding the peace, withdrew with the same measured step, and looked on in cold blood. Outraged at the disobedience, the Justice's wife appeared and repeated the commands of her husband, but was received with derision. Finally the antagonists cooled, shook hands by the fighting code, and each rode on his way. "By the "law, must they not give obedience to your commands, "I asked the Squire, and abstain from their squab- "bling in your presence?" "They should," was the answer. "Well! and could you not bring them into "court for their behavior, and have them punished? "I could," was the second laconic answer of the good-natured Justice, who seemed to make far less of the matter than his indignant wife, and was of the opinion that it was more in keeping with his official worth to pass over an apparent slight, instead of taking the proud revenge which an injured self-love might demand. 33 miles farther, through desolate woods again, and we arrived at

Washington on the Tar river, a new-settled little place of perhaps 30 houses. The Tar river * comes

* Higher up this river are several other small towns, as Martinsburg, Tarburg &c. The latter is an inconsiderable place of itself, but before the war there was every year brought

from the mountains, is a mile wide here, and flows into Pemticoe Sound at Bath-town. The entrance to Pemticoe Sound is below Cape Hatteras through Occacock Inlet, and therefore the same as that ships must take bound for Albemarle Sound or into Neus-River. The generally difficult and dangerous passage into the rivers and bays of North Carolina, occasioned by shoal-water, sand-banks, low islands and bars, is a great hindrance to the trade of this province which on that account was long neglected. The trade of Washington is as yet trifling; the chief occupation is the building of small ships and vessels, which are put together entirely of pine timber and sold very cheap, but they do not last long, this timber quickly rotting under water, but lasting well above ground. Here, as well as in most of the small towns of North and South Carolina and Georgia, which are unable to carry on a large trade of their own, the greater part of their produce is taken out by the New Englanders who, (like the Hollanders in Europe), have begun to be the middlemen and freight-carriers of America. They generally come to these southern parts in the autumn, in small schooners and shalops, spend the winter either at one place or at several, bring with them cyder, cheese, apples, gingerbread, rum, sugar, iron-ware, and trinkets which they exchange in small trade for pelts, pitch, tar, and the like, returning in the spring.

The New Englanders are in general active and industrious seamen, full of enterprise. The whale-

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in and sold there 7-8000 Pd. of English goods; not all paid for at this time.

On the banks of the river as far as Martinsburg &c. there are found various shell-banks, full of oyster and other shells.

fishery in which they are engaged, especially the inhabitants of Nantucket, brings it about that they visit the most distant seas and parts of America. They follow their gainful pursuits, now on the coast of Labrador, now among the West Indian islands—and they have often cruised even to the Falkland islands. But their somewhat more vigorous traffick, as it appears, with the inhabitants of North Carolina, besides being due to the profits and advantages on both sides, may be explicable further because of very many New England emigrants having settled in North Carolina.

The nearer, so-called post-road to the South, formerly ran from Duckenfield, on the south side of Albemarle Sound, straight to Bath-town, on the north side of Pemticoe Sound (a distance of 45 miles)—but the ferriage over the latter, 8-9 miles across, being often long delayed by wind and weather or other hindrances, and Bath-town, a place of hardly a dozen houses, affording scant accommodations for travellers, they preferred turning off to Washington and considered that by avoiding such obstacles they were repaid for going the long road.

The space between the Albemarle and the Pemticoe Sound is mainly filled by a swamp of great length and compass. This also, from the unwholesomeness of its neighborhood, is called Dismal Swamp. It bears besides the name of Alligator or Crocodile Swamp, those animals frequenting the region rather plentifully. It is commonly said that the Alligator or American crocodile is found no farther north than the Neuse river, but it is nothing rare to see them much to the north of that, i. e., about Cape Henry in Virginia.

On the road from Edenton to Washington not a soul

met us, and we saw but few dwellings; and quite as lonesome were the 40 miles from Washington to New-Bern. We passed Batchelor's Creek and Neuse River, and for the last 18 miles saw not one house, but sheep, swine, and black cattle enough, which roam the forest. Beasts of prey have free booty among these herds: multiplying fast and costing nothing, nobody has an eye to them.

It is an advantage that now at mid-winter one has almost the same prospect as that to be had in summer. That is to say, the sparse, thin grass which grows under the pines and on the dry sand turns as wilted and brown from the heat as it is now yellow and sapless from the cool winter nights. Everywhere the *Stipa avenacea L.* appeared to have the upper hand here; a rough grass which is eaten by cattle only in the spring while it is quite tender. On the dryer tracts there is absolutely no undergrowth or bush among the lofty pines, and the trees standing by no means close, one can see far between them. But at every brook, or at any rather moister spot, there appear forthwith beautiful thickets of evergreen bush, called indiscriminately **laurels**, and such places consequently are known as laurel-swamps.

The *Yucca filamentosa L.* was now often to be seen in the woods. Its leaves can be cut into threads, thin and strong, of which the people make use for various household purposes.

The red bird and the blue bird (*Loxia Cardinalis* and *caerulea L.*) frequently appeared hereabouts, and other birds which winter in this region and only in summer migrate to Pensylvania and New York. Swallows come hither from the south the last of

March and early in April, and stay until late in November. At Charleston they are absent hardly longer than from December to February. Regarding the migrations and winter-home of the swallows, so long a matter of uncertainty in Europe, it will soon be possible to obtain more exact information from America. ✝

New-Bern is situated on a point of land, where the rivers Neus and Trent unite. The beds of these rivers are very deep and flat and subject to frequent overflow. The region thus is not the healthiest nor its air the purest, and almost every autumn brings sickness which carries off many. Moreover, the mortality among children in this and other parts of the south is perhaps double what it would be for an equal number of children in the northern states. The river Trent has only a short course inland, but the Neus comes down about 200 miles from the mountains, where it rises near Mount Ararat, making a little fall 70-80 miles to the west of this place. The entrance for ships coming in from the sea is impeded by the bars already often mentioned; the passage is by Occacock Inlet, or the same as that ships must take bound for Edenton, lying much to the north. The town is small, not yet rich, and the houses are all of timber. Its trade is restricted entirely to the products of the forests and of cattle-breeding. Formerly it was the seat of government and for the last British governor, General Tryon, there was a very genteel house built, the only one of brick, on the banks of the Trent. This palace, for it is honored with that much too splendid name, is at this time almost in ruins; the inhabitants of the town took away everything they could make use of, carpets, pan-

nels of glass, locks, iron utensils, and the like, until watchmen were finally installed to prevent the carrying-off of the house itself. The state would be glad to sell it, but there is nobody who thinks himself rich enough to live in a brick house. The government of North Carolina was at the outbreak of the war removed to Brunswick, continuing there for some time; during the war there was no fixed seat of government, but at last the inland town of Hillsborough was chosen, for the better convenience of the more populous back-country.

The state of North Carolina, to remedy the oppressive lack of hard money, was obliged to have recourse again last year to paper-money, and by an Act of Assembly 17th May, 1783, 100,000 Pd. was struck off. Other states, doubtless, will soon be compelled to follow the example of North Carolina, for the gold and silver which was brought into the country during the war by the British and French armies, and by the very profitable West Indian flour-trade, seems to be rapidly disappearing in trade with Europe. In North Carolina there is almost no hard money now to be had; not that it has all been sent out of the country, but because of the general dislike for the new paper-money, in consequence of which everyone is disposed to keep what coin he has as long as he can, and to get rid of the paper he receives, or rather has forced upon him, as quickly as possible, from the fear that this, by precedent, will decline in value. Paper-money is everywhere taken squeamishly and unwillingly, and owes any value it has to the extreme necessity. In the middle parts of North Carolina, about Hallifax and on the Roanoke, where the chief crop is tobacco which

may be sold for cash money at Petersburg, they refuse absolutely to give paper any currency. The paper chosen for the new money being very fine and thin, the people fancy (especially as from former examples the guarantee seems to them uncertain) that such thin paper was selected on purpose, so that a part of these bills might be torn and destroyed before the time fixed for redemption, which would be so much gain for the treasury. This mistrust is proof that the people have not the highest regard for the government. A General was paying off North Carolina troops in paper-money and they refusing to accept such bills as were any way damaged, he tore and cut bits from the whole supply, and dispensed these bills with the notification: that if they would not take the torn, they should have none of any sort.

A certain amount of this new paper-money comes back to the State treasury in taxes, which must be settled partly in paper-money and partly in 'certificates' which during the war the state issued to the inhabitants for services rendered, supplies furnished &c. Even those who have none of these certificates for deliveries made by them, must make use of them for paying a certain part of their taxes; a number of the inhabitants are therefore obliged to buy these certificates from others for the purpose. They are readily exchanged, not for paper-money, but for cash or goods, at a fourth or a third of their face value; the people's distrust of the government making them glad to get free of the certificates as well as may be. The government has reckoned on this exchange to distribute more evenly among the inhabitants the burden of contributions to the war, and the sums coming in

through such certificates are to be regarded as an extraordinary impost, over and above the tax necessary for meeting the state's expences, and so much the less felt by the subject because until very recently the certificates were looked upon as worth nothing whatever.

In addition, the paper-money being supported by law, merchants and shop-keepers must take it, giving in exchange for paper, goods that they are unable to get elsewhere except for cash money. The amount of the produce of the country, which the merchants take in lieu of payment, is not sufficient to make good the annual imports; and the people, disposed to idleness and good-living, commonly buy more of the merchants, and in advance, than their labor amounts to. The merchants are therefore obliged, and it is their custom, to sell on long credit, but they are in consequence involved in continual processes at law and suits for debt.*

The subjects are in debt to the state, the state to the subjects, and these very generally among themselves. The non-payment of these debts being due especially to the lack of current coin or a valid substitute, the renewed introduction of paper-money was held to be expedient. The assertion is made that the first call for it came from very respectable citizens who were

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* The planters in North Carolina are generally in debt to the merchants; in South Carolina, on the contrary, where products of greater value are raised, the merchants are oftener in debt to the planters. In North Carolina there are considerable land-holders, owning 2-300 negroes, who yet cannot command enough cash to pay their taxes, and must sell negroes or horses to get money. ✚

however greatly in debt, and that they were supported by others who had claims on the state, but that the people in general were against the measure. Therefore, to place an amount as much as 100,000 Pd. the more easily in circulation, and in order to make the paper more acceptable and give the inhabitants time to recover themselves and bring more order into their affairs, a law was passed which made all legal claims and actions in cases of debt of no effect for the space of one year.

The taxes at this time in North Carolina amount, under divers heads, to about 1½ per centum of all property. The land-tax in itself is very small, only 3 pence in the pound, and besides lands are assessed very low, greatly under their true value, the valuation being made by 9 sworn men (Assizers) in each county. For example, the dry pine-land, or 'pine-barren,' is fixed at a shilling the acre, and thus 20 acres of such land pay 3 pence, and 100 acres only 15 pence. So trifling a tax does not fall heavy even on those who own great tracts of land, one man, for instance, in North Carolina owning 50,000 acres, and many 20,000 to 10,000 acres;* their practice being to keep so much together as long as they can raise the taxes without difficulty. Such extensive possessions as these never being sufficiently cultivated or utilized, it appears at once that an increase in the land-tax would further industry and be an advantage to the country; but the poorer part of the inhabitants resists any increase, and if it was made, would rather withdraw to

* By the above valuation the land-tax on 10,000 acres pine-land amounts to only 6 Pd. 5 shillings, about equal to 37 fl. 30 kr. Rhenish.

other regions, where land is still to be had not taxed at all or very little.

The manner of taking up land usual in North Carolina was formerly as follows: a piece of land possessed of no man, was sought out, and taken over as freehold either from the crown or the proprietors of the province on payment of 20 Pd. for a thousand acres, and a shilling a year ground-rent for every 100 acres. One could, moreover, for 1 penny the acre annual ground-rent, have the use of as much land anywhere as was desired.

The maintenance of the civil list of the state of North Carolina is said to amount at this time to only some 15000 pounds. North Carolina during the last war set up at one time and another 10 regiments, each commonly of but 300 men, and towards the end of the war much less than 300. The number of the people of this state was estimated by the Congress in September 1774 at 300,000 souls, among whom it was believed were 75,000 arms-bearing men, but this estimate is likely very much too high.*

The form of government of this state does not differ materially from that of most of the others. The executive power is in the hands of the Governor and the Council of State, who are elected annually by the members of the Assembly. The Governor must own property in land to the amount of at least 1000 Pd.,

* According to a later numbering of the people in the 13 provinces, published by the Congress since the Peace, only 200,000 souls are given for North Carolina.—Several American almanacs for 1785 and 1786 still make a parade of the figures for 1774, which exceed the last by at least half a million, in the total population.

and must have lived five years in the province. The Assembly, or the law-making power, is made up of the Senate and the House of Commons; a Senator must have lived a year in the province and own 300 acres, a member of the lower house at least 100 acres. The members of both houses are elected annually; all free inhabitants, who have lived a year in the country and have paid their taxes, cast their votes at the election for members of the lower house; but for a vote at the election of Senators they are qualified by a freehold of 50 acres of land.

From New-Bern to Snead's Ferry on the Neus river it is 53 miles, flat sandy land covered with pine-forest. The sand, however, where it has not been disturbed by wind, weather, or water, is generally overlaid with an inch or more of good black earth; but if the timber has been taken off, the land ploughed or in any way touched, this black earth disappears rapidly. Everywhere clay lies beneath the sand, often very little below the surface, and could at small expence of trouble be turned up for the betterment of the sand. Approaching the sea-coast by this road, we observed that in place of the fine, white, barren, sand, blacker and mirier soil appeared now and then; really such places were where large swamps had dried off, and they deserved to be made more use of. Still nearer the coast, the landscape is no longer so uniformly flat as farther inland, but grows uneven and broken, with ranges of very low sand-hills standing one behind the other or pell mell. On the Neus river also it was observable that the face of the country was changed, the land losing its dead flatness; a broad and high natural embankment followed the course of the

river, and the land behind seemed lower than the surface of the river itself. I make mention of this here for the first time, although it is a circumstance often to be remarked in other regions and along other rivers, and a source of danger at times of sudden overflow; at least, on the Roanoke, the Trent, and other rivers, many cattle pasturing in these low woods are lost when there is a sudden rise of the water. These low-lying tracts are filled with evergreen bush, and fine old trunks which have a grey and ancient look, from the long thick moss (*Tillandsia usneoides*) everywhere pending. In these shadowed and not unamiable wilds a rich harvest of the finest and rarest Carolinian plants might be expected, allowed no chance by the dry and burning sand;—but at this season, alas, everything was dead.

In the midst of the sandy levels and the forests there are here and there little lakes, often pretty deep, and apparently with no outlet or supply from other waters. In several of these, fish are said to be found, coming from no one knows where. The same is true also of South Carolina, where in deserted rice-plantations rain-water assembles in large ponds, which have no running water outlet, and yet fish are found in them. The people believe that the seed of the fish fall down with the rain, and the wild ducks and numerous other water-fowl which visit these ponds are not suspected.

At Snead's Ferry there is a free prospect over the river and towards the open sea. Here, and for some distance farther back, the vehement and continual roar of the surf was to be heard, or the sound of the waves breaking on the main-land, although the shore is 4-5

miles away. The Neus, as well as the other rivers of this country yield throughout the year an abundance of fish, of one kind or another. Mullets (*Mugil Albula L.*) come in the autumn with the first cold nights, going up the river in great schools from the sea to spawn. At that time many boats and shalops are to be seen about the mouths of the rivers; with little trouble they take a quantity of these fish, salt them, and convey them to the West Indies. Mullets are in the rivers throughout the winter. With them come numerous schools of a sort of trouts, which are a more delicate fish, for no sooner does a fresh north-wester blow than they go quite numb, and may be taken almost dead from the water.

A chain of small, low islands lies close in to the main-land, along North and South Carolina, forming a narrow, navigable sound. The soil immediately on the coast is not altogether bad, in many places better than that more inland, and many people are tempted to live there, where in addition to farming they may get a support and money by fishing. The shore, it is said, is pretty well settled already; and it was astonishing, after we had come the whole way from New-Bern without meeting a soul, to be assured here that by a few musket-shots and in an hour's time, 200 men might be brought together from the adjacent country.

The alligator or American crocodile begins to be more frequent in this region. But at this time of the year none were to be seen, for they keep hidden in their holes during the three winter months; only on very warm days, it is said, are their tracks to be found on the sand. There is ascribed to them a strong odor

of musk. One has not much to fear from them, except when bathing or swimming in the rivers. Their increase is greatly checked by the fore-mentioned buzzards, which hunt out the alligator eggs in the sand and eat them. They live chiefly on fish; but their voraciousness tempts them to snap at anything that comes in their way, and pieces of wood, leather, or iron have been found in their maws.

Of serpents there are found in this and the neighboring regions almost all the known species of North America, and rather plentiful, but few of them are venomous. They do not often resort to the great swamps, because they find no good holes in the wet earth, and in winter would be in danger of freezing or drowning under the ice, in their holes. A snake, called the 'black runner,' was killed some time ago and found to be 12 ft. long.

Our journey was favored with a series of clearer, warm days.* Frogs were everywhere noisy in their swamps; bees flew; bats fluttered of an evening; black urchins gamboled naked in the open. This, in the first week of January, was augury of an early spring; however, scarcely a plant dares unfold until the beginning of the month of March, when the spring may really be said to open in this region. Spring-frosts here fall at times even in April. But severely

* The same warm weather which we had in North Carolina the 4th, 5th, and 6th of January, with south-west winds, was observed at Philadelphia on the 6th and 7th. There as here it was the effect of the southern wind, which reached the northern parts later. Philadelphia newspapers stated that at the time the thermometer rose 53 degrees within a short space, and snow and ice suddenly melted off.

cold winter-weather * is nothing uncommon in this uncertain climate, often holding for a good many days. Three years ago the Neus river at New-Bern (in latitude 35 south) was so hard frozen that men and animals could cross on the ice.

The *Iris verna L.*, called Violet here, the *Viola pedata* and *palmata, Gomphrena flava, Lupinus perennis, Sanguinaria canadensis, Sarracenia lutea* and *purpurea, Cypripedium Calceolus, Azalea viscosa, Kalmia latifolia, angustifolia,* and *glauca,* and other plants seem, from the partial accounts I had, to belong among the first to appear in the spring, blooming towards the end of February or the beginning of March. The remarkable *Dionæa Muscipula L.* (Fly-trap) is at home in this region, but seems to be known to very few of the inhabitants. And besides it, there are many rare plants to reward the pains of the future investigator.

In this thin sandy soil, corn is planted 6 ft. apart. A bushel of seed therefore is enough for 10-12 acres of land, yielding some 12-15 fold, and more on new

* The severity of the winters is often strangely different as between regions north and south. Linnaeus observes of the celebrated hard winters of 1739 and 1741, that in those years in Norway, beyond the Alps, there was a very mild winter; that in the years 1745 and 1746 when Sweden had a very passable winter, there was at Montpellier, on the contrary, severe cold; and that in the winter of 1735 and 1736, when Sweden and Holland had very moderate weather, at New York in America brandy froze in the cellars.—It was likewise with the winters 1779-80, and 1783-84, which were uncommonly hard throughout the middle and southern colonies of North America, but in Nova Scotia and Canada were as unusually mild. Similarly opposite conditions have several times been remarked as between the southern coasts of England and the northern parts of Scotland.

land. One and the same acre is cultivated many years together, as long as it will bring anything whatever, and without any dunging or fallowing; until the earth is quite exhausted there is no taking in a new piece of land, for it never suits their fancy to better the old by dunging.

In North and South Carolina, besides corn, a small kind of peas, called Indian peas, is very much raised. They yield heavily and in good years produce 40-50 for one. They plant them the end of April or the first of May and gather in October. The people here distill a bad sort of brandy from potatoes (*Convolvulus Battatas L.*).

The lack of salt and its dearness during the war, when a bushel often cost one or two Spanish dollars, brought it about that on the coast of North and South Carolina they began to boil sea-water in pans. This was done at the time with good success and great profit, but is now given over since it can be had in plenty and cheap from the West Indies. Since the value of the wood may be counted as nothing, this manner of preparing salt would still be profitable, if the price of salt continued at no more than ⅜ of a dollar, but this is not the case. No attempt has been made to get salt from sea-water by evaporation in pits. The expense for salt is considerable, and many vessels are engaged in its conveyance. Besides that necessary for pickling fish and meat, it is the custom in the back parts and the country at a distance from the coast to give the horses and black cattle a little salt several times a week, as well with a view to the health of the cattle as to accustom them to the house and the plantation, and the cattle hanker after it. Near the

coast, however, even where the cattle cannot get to salt-water, they are not so lickerish; and no salt is given them, the people believing (but mistakenly) that the air itself and the falling dews are laden with salt evaporated from the sea.

Sweet water is found almost everywhere along the coast at a slight depth. Even near the shore, if a pit is dug with the hands in the sand, it soon fills with water tolerably fresh. A few miles from the sea, water is found in the clay-bed under the sand at a depth of 2-4-6 feet. Also there are very good and fresh natural springs in this low country; in the midst of the swamps strong, pure springs are found, for which commonly a way is opened by trees rotting out and leaving holes.

That the greatest and most important part of the immense forests of this fore-country consists of pine, I have already several times mentioned. But it is precisely this wood that so much advantages the inhabitants, in which lies the compensation for their generally sterile soil; it is this that supplies them with excellent timber for building and other purposes, and with the opportunity for considerable gain from turpentine, tar, pitch, resin, and turpentine-oil. Therefore the pitch-pine is for North Carolina the tree most important and profitable.

Turpentine, as is well known, is obtained by cutting into the trunk. These cuts, which they call 'boxes' here, are made at first quite low, only 1 or 2 feet above the ground; in the following years they are extended upwards, new ones being made above the first; but there are no cuts made higher than 5-6 feet above the ground, although it would be practicable to

gather turpentine higher up, with the help of a small ladder. The great quantity of the wood is the reason why the trouble is not taken, new trees being worked in preference. According to its strength, 2, 3, and 4 boxes are cut in one tree; this is done in mid-winter, for in summer the wounding of the tree would be fatal. The resinous sap, or turpentine, begins to flow in April and continues until into the month of September. Twice a month, and commonly in the new and full moon, the outflow is 'dipped,' or scraped, from the boxes, and as often the boxes are chopped a-fresh, or 're-chip'd,' else dust or the hardened turpentine itself would clog the openings of the sap-vessels and check the flow. One man can readily care for 3000 boxes, and that number is generally assigned one negro, the negroes doing the most of this work. At the best and warmest season one negro can easily fill 15-20 barrels of turpentine a day. In rainy and cloudy weather the outflow is less, and nothing is done. It is reckoned that from 3000 boxes more than 100-120 barrels in the average should be obtained in a summer. For these 3000 boxes some 12-15 acres of forest should suffice, according as the trees stand close or far apart, and are strong or not. A barrel of turpentine, 32 gallons, is now worth 16 shillings or 2 Spanish dollars.

Tar is coaled from the wood of this and other sorts of pines; but old wind-falls and dead trunks of the pitch-pine are greatly preferred, the pitch-pine being the most resinous, and hence losing nothing if long exposed to the air and weather, merely the watery sap evaporating and the resinous part remaining behind. This dead wood used for tar-burning is called 'light-

wood,' and the tar prepared from it is called 'dead tar' to distinguish it from 'green tar' which is got from freshly felled trees, already used some years for turpentine. The green is preferred to the dead. Tar-coaling is done in a pit lined with clay, in which the wood is covered with earth and coaled by a slow fire; the tar sweated out goes to the bottom and runs through wooden pipes into casks more deeply buried. + Tar-coaling is here a winter-business, and by the use of wind-falls, dead trees, and those that have been boxed for turpentine, the people make money almost from nothing, since where this business is not carried on, such wood rots useless in the forest. A middling sized cart full of resin-wood, or so much as two thin oxen can draw, yields a barrel, by the usual estimate, or a cask of tar, worth 12 shillings or 1½ Spanish dollars.

From the tar is burned **pitch**; either in great iron cauldrons or, more commonly, in pits, 6 ft. deep and four and a half across, and lined with clay if the soil is not already clay. Such a pit can hold 50 or more casks of tar. Three casks of tar give about 2 of pitch. A cask of tar costing 12 shillings, and one of pitch 20 shillings, it follows that since 3 of the one make but 2 of the other, only 4 shillings are gained. But there is besides a saving in casks, rated at 2⅔-3 shillings a-piece, and the pitch loses nothing in keeping, whereas tar is a diminishing article.

Oil of turpentine is obtained by distillation of turpentine, and the residue is common rosin. A cask of turpentine gives some 3 gallons of turpentine-oil and 29 gallons go to rosin. A gallon of turpentine-oil costs a half dollar, and a cask of rosin three dollars.

All these works are carried on mainly by negro slaves, and the profit arising is so much the greater because no establishment is necessary beyond the working hands themselves. It is here and there estimated that each working negro, what with these and other uses made of the forest, should bring in to his master one to two hundred pounds current a year, but this calculation may be perhaps too high.

Formerly one could buy 100 acres of this pine-forest for 4-5 Pd. Current (about 24-30 fl. Rhenish). He who took up 1 or 200 acres, generally had the use of six to ten times as much more lying adjacent, there being unalienated timber-land in plenty. At present, the returns from lands sold being applied in the settlement of the state debts, the price of 100 acres of timber-land is raised to 10-12 Pd.

The Pitch-pine, here so-called, which is greatly preferred for turpentine because most resinous, has three very long needles in each case; the tree is of a tall comely growth, and has long bare boughs upward-bent, which, commonly at the extreme end, bear outstanding tufts of needles. It appears more like *Pinus palustris Mill.** than *Pinus Taeda L.*, since it grows here almost entirely on barren, sandy soils, and is found oftener towards the coast than farther inland. The tree is not apparently weakened if turpentine is drawn from it many years together, and it is even thought that it merely grows the richer for these tap-

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* *Pinus palustris foliis ternis longissimis,* Von Wangenheim's *Beyträge, 73.* Marshall's *Amer. Grove,* 100. The former says, it seems to contain little of resinous parts; the latter, that it is as resinous as any other kind.

pings, and used finally as light-wood, yields the more in tar and pitch.

Together with it, but in greater plenty farther inland, grows the **Rosemary-Pine** * so-called, which has but two needles, and short ones; and yields vastly less turpentine than the other, nor for so long a period. The name **Yellow-Pine** is given in this country for the most part to the rosemary-pine; but others hold that this is a particular variety of the pitch-pine, distinguished by a thinner, smoother back, a softer, yellower wood, somewhat shorter needles, a straighter and less branching growth, and that the variety may be discerned quite young and makes a better house-timber. Others again give the name yellow-pine only to very old pitch-pines, and believe that the tree makes no good timber until then. It is difficult to get a clear notion of the many names, varieties, and sub-varieties of this region.

The products of these trees having long brought in good returns to the province, there have always been official inspectors appointed to look into the quality and purity of the turpentine and give attestation. In addition, the wood of these forests is made into boards, shingles, cask-staves &c., dressed and exported, and to this end there are already a good many saw-mills established in the country. The means of gain, within the reach of every owner of such a tract of wood-land, being so manifold and so easy, it is certainly no hard matter to grow rich in a short time, if it is regarded as indifferent in what state one leaves the land to his heirs.

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* *Pinus virginiana;* Jersey-Pine; two-leaved Pitch-pine—von Wangenheim's *Beyträge,* 74; Marshall's *Amer. Gr.,* 102.

From the Neus river to Wilmington on the Cape Fear river it is 42 miles through forest and sand. The many paths and roads inter-crossing these woods often bring travellers to confusion. Here and there, indeed, guide-posts are set up, but nothing is written on them. Once we got quite out of the road and might have gone heaven knows where, had not a gentleman met us and set us in the road again. This was the first human creature that for many days had met us on this road. He had come a matter of 21 miles to have a trifle made at a smith's, and tomorrow would be going 19 miles farther to find a tailor—and was riding on a saddle-cloth.

Wilmington stands close to the Cape Fear river, and lower than the general sand-surface. There are in the town perhaps 150 framed houses, but most of them of good appearance. This was once for a good while the capital of the province, and drove a considerable trade with the West Indies and the northern provinces; at the present time its trade is almost entirely with Charleston. The harbor should be good; but the entrance is difficult for larger vessels, from a bar giving no more than 9-10 ft. water. Larger ships must consequently first lighten cargo at Brunswick, a little place 16 miles from here, lying nearer the mouth of the river. Nine miles below Brunswick, on Cape Fear so much dreaded by mariners, stands or rather stood, Fort Johnson, erected long ago for covering the approach; both this and Brunswick are now almost wholly demolished and deserted.

While on the road to Wilmington I heard mention of a place by the name of Rocky-point, on the Cape

Fear river. Merely the name must excite attention, since from the general nature of this country, a **rocky point** suggested something unlooked-for, something strange. But at Wilmington I soon found the explanation. This town is situated on the deep-cut banks of the river; behind and around, the land lies higher, the continuation, that is, of the general sand-surface, here broken by hollows formed by the river and several other smaller streams. Near to the town, and hard by the water, there are apparent at the surface several beds of **shell-stone,** many feet in thickness; covered with a bed of white, pure sand in which no strata were plainly to be observed. The shell-bed is thus laid bare at the river-side, and consists of a stone for the most part hard, here and there clearly stratified. It is altogether made up of the same sorts of cockles and shells as that mentioned at York in Virginia. They are more or less crushed, particularly in the deepest layers; higher up, a good many are to be seen whole among those broken, and quite at the top they are not so closely associated, but mixed with sand, reddish clay, and, now and then, small rounded pebbles. In places where the harder rock has been exposed to the air and the current, there are many hollow spots among the shells and fragments, the sand or other binding parts having been washed out. In the middle of this rock-bank there appears a layer which is distinct in hardness and purer whiteness, and might almost be taken for white marble were it not for the very small crevices among the shell-fragments, here very small themselves. Now and again there were plainly to be seen entire impressions of the flat sea-star (*Echinus Orbiculus L.*).

There grew on the rocks *Acrostichum polypodioides* and *Asplenium rhizophyllum L.*

The day after our arrival we attended a public auction held in front of the Court-house. House-leases for a year were offered for sale, and very indifferent houses in the market street, because advantageously placed for trade, were let for 60, 100, and 150 Pd. annual rent.

After this, negroes were let for 12 months to the highest bidder, by public cry as well. A whole family, man, wife, and 3 children, were hired out at 70 Pd. a year; and others singly, at 25, 30, 35 Pd., according to age, strength, capability, and usefulness. In North Carolina it is reckoned in the average that a negro should bring his master about 30 Pd. Current a year (180 fl. Rhenish). In the West Indies the clear profit which the labor of a negro brings his master, is estimated at 25-30 guineas, and in Virginia, according to the nature of the land, at 10-12-15 guineas a year. The keep of a negro here does not come to a great figure, since the daily ration is but a quart of maize, and rarely a little meat or salted fish. Only those negroes kept for house-service are better cared for. Well-disposed masters clothe their negroes once a year, and give them a suit of coarse woollen cloth, two rough shirts, and a pair of shoes. But they who have the largest droves keep them the worst, let them run naked mostly or in rags, and accustom them as much as possible to hunger, but exact of them steady work. Whoever hires a negro, gives on the spot a bond for the amount, to be paid at the end of the term, even should the hired negro fall sick or run off in the meantime. The hirer must also pay the negro's head-tax,

feed him and clothe him. Hence a negro is capital, put out at a very high interest, but because of elopement and death certainly very unstable.

Other negroes were sold and at divers prices, from 120 to 160 and 180 Pd., and thus at 4-5 to 6 times the average annual hire. Their value is determined by age, health, and capacity. A cooper, indispensable in pitch and tar making, cost his purchaser 250 Pd., and his 15-year old boy, bred to the same work, fetched 150 Pd. The father was put up first; his anxiety lest his son fall to another purchaser and be separated from him was more painful than his fear of getting into the hands of a hard master. "Who buys me, he was continually calling out, "must buy my son too," and it happened as he desired, for his purchaser, if not from motives of humanity and pity, was for his own advantage obliged so to do. An elderly man and his wife were let go at 200 Pd. But these poor creatures are not always so fortunate; often the husband is snatched from his wife, the children from their mother, if this better answers the purpose of buyer or seller, and no heed is given the doleful prayers with which they seek to prevent a separation.

One cannot without pity and sympathy see these poor creatures exposed on a raised platform, to be carefully examined and felt by buyers. Sorrow and despair are discovered in their look, and they must anxiously expect whether they are to fall to a hard-hearted barbarian or a philanthropist. If negresses are put up, scandalous and indecent questions and jests are permitted. The auctioneer is at pains to enlarge upon the strength, beauty, health, capacity, faithfulness, and sobriety of his wares, so as to obtain

prices so much the higher. On the other hand the negroes auctioned zealously contradict everything good that is said about them; complain of their age, long-standing misery or sickness, and declare that purchasers will be selling themselves in buying them, that they are worth no such high bids: because they know well that the dearer their cost, the more work will be required of them.

For the betterment of the condition of this class of mankind especially the Quakers in America have for a long time worked, but in vain. Only recently one of them, a member of the Virginia Assembly, had courage and philanthropy enough to make a public proposal for freeing the negro slaves; but this time he did not succeed.* However, while the Quakers have been

* "In Virginia the slavery of the negroes is now effectively "annulled; no more black slaves may be imported; schools "have been established for their instruction, and societies "formed to protect them against the severities of their mas-"ters.—And in Pensylvania all negro slaves have been declared "free, born in the province since the Declaration of Inde-"pendence.

For a good many years the spreading abroad of more favorable opinions regarding the negroes has been effected chiefly by Anthony Benezet's *A short Representation of the calamitous State of the enslaved Negroes in the British Dominions.* Philadelph. 1766. 8; and Dr Rush's *Address to the Inhabitants of the British Settlements in America upon Slave-keeping.* Philadelphia. 1773. 8. Both spoke out, and were for the rights of humanity and freedom for the negroes;—shortly other writings and articles followed, which supported and made better known the position (at first criticized) of these high-minded and philanthropical men. Since that time the betterment of the condition of the negroes has been had constantly in view,—and it appears now that the effects so long desired are working.

looking forward to a time when the civil powers should give ear to their repeated philanthropical representations, and by general ordinances entirely do away with the thraldom of the Africans, individual members of their society have held it a matter of conscience to encourage others by example to so praiseworthy an end. But their benevolent and noble purposes have commonly been thwarted by the corrupt state of mind prevalent among the negroes themselves, a result due to nothing but their rude bringing-up and the absolute neglect of their instruction. A rich old Quaker, who lives near Richmond in Virginia, gave all his slaves their freedom, but under the condition that they should remain with him and work for very fair day's wages. All of them solemnly promised, but as soon as they had got their free papers, most of them left him. Another rich Virginia Quaker set his negroes free likewise, and gave each family a bit of land on which they could support themselves, paying annual rent like other tenants; this indeed they began to do, but no longer feeling under strict oversight, and moral and religious principles (of which they knew nothing) not keeping them in order, to which they had previously been accustomed by force alone, the good Quaker's designs were not carried out, and he soon saw his lands and himself deserted of his free negroes. One hears of many such instances, + cited to prove that the negroes generally are incapable of making any good use of freedom, and to support the quite ungrounded opinion that they are destined by nature for servitude. But as many examples might be given of free negroes who live decently, orderly, and industriously; and that so much may not be said of all of

them, and certainly it may not, is to be explained solely on the ground of the great and intentional neglect of the education of their children; and the disposition to indolence, thievery, and untruth laid to their charge is the inevitable consequence of slavery. They are let grow up like other cattle, and taught no rule but the will of their master, have no motive to action other than the whip. It is said that the negro is by nature trifling, and can be accustomed to work only by compulsion and rigid oversight, and hence, if left to himself, would be nothing but a useless member of the community and a burden therein. It is very likely that the African, blessed at home by kind Nature with almost everything he needs for his support, has brought with him thence no great inclination for severe and painfully continuous labor; but no good reason can be given why the negro, forcibly transferred to America, should do zealously and with pleasure what the American planter himself does not like to do—why the one, in the sweat of his brow and on very scant rations, should till the fields so that the other may spend his days in peace and good-living. "Were I to defend the rights of Europeans to make "the negroes their slaves, says Montesquieu, I could "give only these reasons: The Europeans, having "driven out and exterminated the native Americans, are "compelled to bring the Africans under the yoke in "order to till such great tracts of land. Sugar, indigo, "rice, &c. would be too dear if produced otherwise than "by bondmen. These creatures are so black and their "noses are so flat, it is impossible to compassionate "them. It is difficult of belief that a wise and good "Creator should have placed a soul, much less a

"worthy soul, in such black, ugly bodies. The negroes "think beads of greater value than gold,—which "plainly shows that they are unreasoning beings.* "It is not possible we should regard these creatures "as men, for so we make ourselves no Christians." Montesquieu has here said everything that the defenders of negro slavery are wont to say, whether clearly or ambiguously.

The Cape Fear river divides at Wilmington into the n. east branch and the n. west branch, which receive the Deep river, Haw river, and many other streams. The North-east branch, under different names, extends far into the interior of the country, and is navigable by boat to Cross Creek, 100 miles from here. The straight road from Wilmington to South Carolina lies through a swampy region; the war had left the bridges useless, and we were obliged to go some miles up the North-west Branch by boat, to avoid the swamp. The low banks of the river were grown up on both sides with reeds and canes; closest in were the smaller varieties of evergreen bush, beyond which stood the higher evergreen trees: magnolias, laurels, *Hopea, Gordonia Lasianthus,* and the like, their green a pleasant prospect. Amongst this green grew splendid oaks, water-

* For the truth of the matter, not to be questioned without valid grounds, "that the negroes, as regards their natural "capacities and powers of mind, are in no way inferior to the "rest of the human species," See Prof. Blumenbach's remarks on the negro in *Magazin zur Physik und Naturgeschichte,* IV, No. 3, 4.—An impartial, unprejudiced observer might assemble among the American negro slaves, notwithstanding their unfavorable situation, numerous instances in support of this undeniable truth.

shrubs, *Tupalos,* tulip-trees, and others, the *Tillandsia* hanging in long filaments from their wide-spreading branches, and a number of climbing plants woven everywhere on trunk and limbs—but at the time, unfortunately, most of them were leafless and quite without blooms. The morning of this passage it was bitter cold, felt all the more because it was necessary to keep very still in the little open boat. The negroes rowing kept warm at their work, but none the less they had brought along a few chips with which they studiously kept up a little fire, of no use to them except for the pleasure of seeing it burn. They love fire above everything and take it with them whatever they are about, in the field, in the woods, on the water, and that too at the hottest time of the year. From the plantation where we were landed, (and where for two Spanish dollars cash we had bad tea, worse sugar, no milk, tough beef, and little bread), we came 10 miles, by a long labyrinthine woods-road, to Town Creek, and thence 37 miles of uniform forest, past Lockwood's Folly and Shallot Bridge, to Murray's house at the South Carolina line. The whole way from Wilmington we remarked scarcely 8 or 9 houses.

This road described, which took us through North Carolina, runs near to the coast and is therefore called the lower road. The country does not certainly appear to the best advantage here, but from the character of this region one must not form an opinion of the whole. Inwards from the sea-shore, for 80-100 miles, the land is uniformly a sand-slope, as in Virginia, South Carolina, and Georgia. The higher and more barren parts of this surface are occupied by the immense pine-forests, and called therefore 'dry pine

ridges,' or 'pine barrens.' In the lower parts of the forests everywhere are 'evergreen or laurel swamps,' and along the rivers and brooks there are very generally 'cane-marshes,' among which must be counted the 'savannahs,' very low tracts subject to overflow, where only canes, rush, and sedge come up, but trees and bush very rarely. Farther inland, especially above the falls of the Roanoke, Tar, and Neus rivers, the country has a different look, swelling into hills and mountains; the valleys are well watered and rich in grass; the soil is fatter and more productive; the air wholesomer; oaks, walnuts, and other leaf-trees push out the pines; and these parts are inferior in beauty and fertility to none in America. The pleasant banks of the Dan, the Yadkin, the Holston, and other rivers, are set with numerous plantations and dwellings. Pitch and tar-making are no longer followed, because there are other kinds of trees there, and the soil being better gives guaranty of heavier yields in tobacco, hemp, wheat, and corn. In this part of the province there are already many little country-towns, such as Salisbury, Hillsborough, Campbellton, and others; plans have been made and good sites chosen for many new towns, and the country now once more at peace, these will hasten to arise. The Moravian Brethren have notable settlements at Bethania, Bethabara, and Salem, and here too are distinguished above the other inhabitants for their industry and diligence in agriculture and the crafts. A service which is recognized by most of their fellow-citizens but tempts very few of them to imitation.

Among the inhabitants, particularly of the back

country, are very many German families;* mainly from the Palatinate and Salzburgers; the most of them have gradually worked down from the more northern provinces, and one may believe that they have everywhere found out the best lands.

Near to the mountains, and surrounded by European settlements, there are still a few families of Indians, of the Catawba tribe; a district of 12 square miles is made over to them, beyond which they are not to pass, nor are they to be molested therein by their neighbors.

Among the mountain-ranges which extend through North Carolina, continuations of the great North American mountain-chain, the Tryon, Arrarat, Carraway, and Moravian mountains are especially distinct.

Beyond the mountains, to the west, the limits of North Carolina reach to the Ohio and the Mississippi, and there also many new settlements are gradually establishing.

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* The Germans in North Carolina are for the most part of the Lutheran faith. "From published accounts it is learned "that several Helmstadt Professors, at the instance of the "Evangelical minister in North Carolina, Mr. Adolph Nüss-"mann, ✝ have become associated in the preparation of a series "of school-books for the German youth in that province. "From the profits to be expected, they hope to pay the "passage to Charleston of 2-3 Evangelical ministers, furnished "with a good supply of books presented. It is their purpose "to put together *seven* books, arranged on a common plan, "of which the first has appeared, (Katechismus und Frage-"buch, Leipzig 1787) *Allg. Litt. Zeit.* 1788, No. 8"—North Carolina was most indifferently supplied with schools and educational establishments; but after the Peace the government was beginning already to give especial attention to education and the furtherance of good public schools.

South Carolina.

We found no sort of reason to speak well of our first tavern in South Carolina, either for comfort or charges. For a little bacon and tea, a night's lodging, corn and corn-fodder for our horses the hostess, to make an even reckoning, asked for 3 horses and 3 riders, head for head a piastre, or 6 Spanish dollars in all (14 fl. 24 kr. Rhenish). The night was very cold; what with the rain of the day before, and the night's snow, in the morning everything, earth and trees, was covered with a thin coating of ice. We saw nothing but sand and pine-woods for 16 miles, until we came to a few cabins and then to the plantation of Mr. Vareen. Notwithstanding we arrived here early, the weather being bad as also the state of the road before us, we were obliged to spend the rest of the day, having 26 miles to ride before reaching the next human habitation. At Mr. Vareen's we saw for the first time the staple South Carolina dish, rice in place of bread; for such use it is baked compact and dry, a pound of rice to two pounds of water, so that it may be cut in the dish. Customarily no other sort of bread is seen in the country, and the inhabitants of these southern provinces are so used to rice that now and then it is served in this form in towns, and is preferred to bread. For a change, small, thin cakes are baked, either of rice alone or mixed with maize, and served warm. For the people of the hither Carolinian country rice is the most important food and for their

negroes almost the only food. The lands of our host, being dryer and sandier, were not suitable for the culture of rice; therefore he occupies himself chiefly with **Indigo.**

They have sundry varieties of indigo; but in this flat, sandy region that which is best and most profitable is called, to distinguish it from the other sorts, 'false Guatimala or 'true Bahama.' It does well on soil of a moderate fertility, but if circumstances allow, new land is used or that previously dunged. A few prepare the land for indigo by green manuring, that is, they put on very thin seedings of oats or wheat, and when nearly ripe turn in horses and cattle to eat it off and firm it together.

The seed is planted after the first rainy weather in March or April, in rows 1½-2 ft. apart, the plant growing almost that high. When towards the beginning of July the lowermost leaves grow yellow and begin to fall, and the blooms commence opening, the plant is regarded as ripe for cutting, which is done a second time about the end of August, and if it is a warm fall a third cutting may be had towards the end of September. In order that the work of cutting may be done forehandedly, and not hurried on account of the quantity to be handled at any one time, fields are sown so as to come in at distinct intervals. The plant should not grow over-ripe. Indigo-fields require much attention, and must be diligently kept clean of caterpillars and weeds. Some 20 negroes are necessary to look after a plantation of 50 acres of indigo land and prepare the indigo, over and above what must be done in raising what they themselves and the planter's household need. In cutting and

gathering, the herb must be gingerly dealt with, so that the blueish farina, which covers the leaves and is said to add much to the richness and beauty of the color, may not be rubbed off; nor should the plant be bruised, for if so, its heavy juices spoil the delicacy of the color, which must be got merely by fermentation of the unmangled plants steeped in water. To this end, they are carefully placed in a vessel, the 'steeper,' 10-15 ft. long and 4 ft. deep, the plants lying 12-15 inches deep, over which water is poured; according to the state of the weather; after 12-18 hours the plants begin to warm of themselves, swelling and fermenting; the time of the greatest and most complete fermentation must be carefully observed; the method in use is to place a thin stick over the mass which rises as it rises, but should the mass fall below the point where the staff is propped at the sides of the vessel, it is then time to let off the water into another vessel called the 'beater.' In this vessel the water, charged with the color-particles thrown off in the steeper by fermentation, is by a peculiar process beaten until it begins to foam and rise over the sides, which happens according to the warmth of the weather in 25-30 minutes, more or less. To check a too vehement overflow of the material a little oil is poured on, which has an immediate quieting effect. This beating of the water furthers the association of the color-particles contained in a dissolved state; so as not to miss the point of time when this begins to take place, a few drops of the beaten water are at intervals taken on the finger-nail, on a tin plate, or in a glass, and so soon as a blue shimmer is observed, or blueish particles show themselves, this process also must be

discontinued. There is then, with a gentle stirring a proportionate quantity of lime-water poured on, which brings about the precipitation of the indigo; when this is fallen to the consistency of a thick broth, the water standing above (now clear) is drawn off, and the sediment put into bags and hung up, until the moisture has largely come away. Finally this mass is taken out of the bags, kneaded on boards and wooden spades, divided into little cakes, and thoroughly dried, regard being had to the morning and evening sun. The preparation of indigo, which here and there is carried on with certain variations, is on the whole a chemical process requiring the most careful and exact attention in all its parts, the essential depending always on the right use of the proper moment, at which this or that should be done: The quality of the indigo is as much due to the exactness of its preparation as to the nature of the plant, of the soil, and of the weather. ✚ Hence indigo planters have not always equally good fortune, and often lose by the unskilfulness, malice, or carelessness of their head-men and workmen, much or the whole of a crop. The head-men in this sort of work are commonly negroes, and if they thoroughly understand the management of the indigo, a great value is set upon them, and they often fetch two or three times as much as they would ordinarily.

In the average it is expected that an acre of land will yield 50 pounds of indigo, but very good land 60-70 pounds. Sundry marks determine the quality of the indigo in the eyes of those skilled; its lighter or darker, even and pure color, and the fineness of its particles, are exterior indications by which the prac-

ticed eye fixes the value; besides, the best sort must float in water and quite dissolve, and in the fire be consumed entirely; the more it departs from these peculiarities, the less good and genuine it is held to be. After rice, indigo is the chief staple of Carolina, and the yearly production and export reaches several 100,000 pounds' weight. Its cultivation may and will increase, since there is no lack of suitable land, nor is any great capital necessary for a first beginning. At Charleston a pound at this time, according to its condition, brings 3-5-7 shillings sterling; but neither in quality nor in price is the South Carolina indigo equal to that from the Mississippi, the West Indies, or South America. Besides that mentioned as most usually raised, the 'false Guatimala,' there is cultivated here and there in Carolina the **French or Hispaniola Indigo,** which however does not do so well, because more susceptible to cold, and on account of its deep roots demanding a fatter and richer soil. A third sort is called **wild Indigo** (*Amorpha fruticosa L.*); an indigenous growth, regarding the quality of which opinion is not yet settled, but from its easier cultivation and greater productivity this should be preferable to both the others.

At Mr. Vareen's house I saw the skin of a female red tiger or cuguar (*Felis concolor Linn*), which had been brought down in the neighborhood a few days before. The length of the stripped, and now somewhat shrunken, skin was over five foot from the muzzle to the beginning of the tail, the tail itself somewhat more than three foot long. The back, the sides, and the head were uniformly fallow, nearly fawn-colored, but the flanks and the belly whitish grey.

The individual hairs were of one color throughout. The end of the tail verged somewhat on black, but the rest of the tail was of the color of the body. A paw had been preserved; the claws were crooked and very strong, but there were no bony cases, (as with other varieties of this species), into which they might be withdrawn; they stood free, but so that they could be out-stretched and bent upwards and backwards. Several of the negroes ate of the flesh of the animal, and found it not at all distasteful. The man who killed it came almost upon it in the woods, before he observed it; it fled before him from tree to tree, until he could bring it down with his gun.

These animals are nowhere plentiful this side the mountains, and are hardly to be met with except in the most solitary forests of Virginia and Carolina. They are everywhere regarded as timid, and it is claimed that there are no instances where men have been attacked by them. They venture very rarely into settled parts; in the woods they find prey enough among the tame and wild herds, for which they lurk from among the trees.

Shortly before, a bear had been killed in this region, no less than 7 ft. 4 in. in length, and weighing 500 pounds; evidence that predacious animals find abundant nourishment here; bears in the northern provinces do not reach this size.

Proceeding from the last-named plantation, after a few miles of woods-road, one comes to the so-called **Long Bay** or Beach. Here for 16 miles the common highway runs very near the shore. Lonely and desolate as this part of the road is, without shade and with no dwellings in sight, it is by no means a tedious road.

The number of shells washed up, sponges, corals, sea-grasses and weeds, medusae, and many other ocean-products which strew the beach, engage and excite the attention of the traveller at every step. Circumstances did not admit of our tarrying here at pleasure, however, we industriously collected whatever seemed to us notable. This beach-road consisted for the most part of shell-sand, coarse or fine, with very few, often no quartz-grains. So far as the otherwise loose sand is moistened by the play of the waves it forms an extremely smooth and firm surface, hardly showing hoof-marks. At a distance of perhaps 30-50 paces from the water, there runs parallel with it a line of low sand-swells, 3-6 ft. high and averaging 8-10 ft. across. Towards the sea these undulations were cut away almost perpendicularly, but on the other side were sloping and sparsely grown up with thin grass and bush. These sand-swells which the ocean itself seems to have set as its limit, were notwithstanding broken through here and there, and the land lying immediately behind was much ravaged as a result of occasional overflow.

The road leaving the beach, which extends far away of a similar character, one again traverses gloomy and lonesome woods to the neighborhood of the Waccama or Waggomangh, and beyond, by a narrow tongue of land between that river and the ocean, to Winguah Bay. The Waggomangh is one of the rivers most advantageous for these southern parts; it flows through a considerable tract of the interior country, and is navigable for large freight-boats. Shortly before its entrance into the ocean, it unites with the Pedee and the Black rivers, and they together make the fore-mentioned Winguah Bay.

On this Bay lies **Georgetown**, that is, at the mouth of the Black river. This place is said to have contained formerly 200 houses, of which the greater part were burned during the war by friends as well as foes. The situation is convenient for shipping and trade, and the town is therefore the depot of all the produce raised by the plantations on the neighboring rivers. It is the capital of the District of the same name, its distance from Charleston being 65 miles. We saw this town only from afar, having been landed several miles below it, on crossing the Bay. Twelve miles farther we had the North and South Santee to pass, which in this region are separated merely by a low, marshy island, half a mile wide but several miles long. This island, like all swampy spots on the rivers, was quite covered with evergreen bush, but a plant in bloom was nowhere to be seen. Here stood the canes already mentioned, and of an astonishing length; I saw many of them 36-40 ft. high, and single shoots or joints 10-12-15 inches long, and proportionately thick. The Santee at its mouth is of a considerable breadth; the rivers Catawba, Congaree, and Wateree unite with it. The remainder of the road to Charleston was as little remarkable as that which went before, the way lying through barren, flat, sandy pine-forests, seldom a house or a cabin to rejoice the eye, since everything is crowded near to or on the rivers, or where there is water. Finally, on the 14th of January, we reached Bolton's Ferry, opposite Charleston, and were that evening set over the Bay, three miles wide, to the city. It was a pleasure to us to see our journey from Philadelphia hither now happily ended, for in the present condition of the country, and at this dismal time of the

year, travelling was beginning to be very disagreeable and inconvenient. However, the uniformity of the regions we had traversed had this effect, that even on first entering it, the agreeable and lively aspect of this city made upon us the most pleasing and cheerful impression.

Charleston is one of the finest of American cities; Philadelphia excepted, it is inferior to none, and I know not whether, from its vastly more cheerful and pleasing plan, it may not deserve first place, even if it is not the equal of Philadelphia in size and population. The city contains a number of tasteful and elegant buildings, which however are mostly of timber. This circumstance is explained in part by the natural scarceness of stone in this region; but there seems no reason why bricks might not be used here for building quite as well as at Philadelphia and New York, since nowhere are better materials to be had, or in greater plenty. The number of the houses is estimated to be about 1500. In the plan of the houses especial regard is had to airy and cool rooms. Most of the houses have spacious yards and gardens, and the kitchen is always placed in a separate building, the custom throughout the southern provinces, to avoid the heat and the danger of fire. The chief streets are wide, straight, and cross at right angles; but they are not paved, and hence give rise to a double inconvenience, in rainy and in dusty weather. The greatest length of the city is little short of a mile.

Its situation is 32° 40′ n. latitude, and 83° 40′ w. longitude, on a point of land between the Cowper and the Ashley rivers, the spot where Captain Sayle landed the first planters in the year 1669, settling there with

them because, for fear of the savages, they dared not strike farther inland. A plan for the building of a magnificent city was sketched and sent over by the Lords Proprietors, to whom King Charles the Second had assigned the province of Carolina, but so far this has not been fully carried out.

Both the rivers named are navigable, but for trading-vessels only the Cowper as much as 20 miles above the city. Merchant-men find commodious and safe anchorage between the city and a little island in the Cowper river. This part of the river is called the Bay, and along this side of the city the shore is furnished with excellent wharves of cabbage-trees. The entrance to the harbor is made more difficult by a bar which ships of more than 200 tons cannot pass without lightening cargo. The advantageous site of the city has not been neglected in its fortification; towards the land side as well as at the south-western point there have long been regular works of masonry, which during the war were considerably increased and improved both by the Americans and the English, but are now again fallen to decay. On the landside the city has but one approach, protected by a gate with several walled defences of oyster-shells and lime. Among the public buildings of the city the handsome State-house, the Main-guard opposite, the Bourse, and the two churches, St. Philipp and St. Michael, are conspicuous, all designed after good plans. Two lines of framed barracks, for the one-time English garrisons are not at present made use of. The tower of St. Michael's church is 190 feet high, and has long served as landmark for incoming ships. It was formerly painted white; the American Commodore Whipple hit upon

the idea of painting it black on the side towards the sea whence it can be seen very far, so as to make it invisible to British ships, whose visits were dreaded. But the result so far from being that desired was directly the opposite, for in clear weather the black side is far more distinct, and on gloomy, cloudy days it is seen quite as far and appears, if anything, larger than before.

There is a German Lutheran congregation here, with its own church and minister, but it it not very numerous.

The name of the city, since the last peace, has been changed from Charlestown to Charleston, and at the same time its rank, that of a Town until then, made that of a City. By the English rule those towns only are called cities which have a Bishop and are incorporated, or those which exercise their own granted privileges under the presidency of a Mayor and other officers and use a special city-seal. A bishop Charleston has not, but the dignity of a Mayor, called Superintendent, has been given it under this elevation of rank conferred by the Provincial Assembly.

The number of the inhabitants was formerly reckoned at 10-12000, of which half or probably two thirds were blacks, but at present it is not possible to say exactly what the number is, since no precise baptismal or death lists are kept. The population, besides, has considerably diminished both by voluntary emigration and by the banishment of many of the most estimable citizens of the royalist party. But certainly the number of the white inhabitants is greatly less than that of the blacks, browns, and yellows to be seen here of all shades. In winter the city is less active than in

summer. About Christmas most of the families retire to their country-seats, and spend there the greater part of what remains of the winter. One reason for this is that at that festival season the negroes are allowed somewhat more liberty, and fearing they might use it in a bad way, the proprietors deem it well to be present themselves and at the same time look after the progress of their plantation affairs. With the coming of the sweltry summer days all that can hasten back to town. The nearness of the sea and the cooler winds blowing thence make summer in the city pleasanter and wholesomer than farther inland among woods and swamps.

The manners of the inhabitants of Charleston are as different from those of the other North American cities as are the products of their soil. The profitable rice and indigo plantations are abundant sources of wealth for many considerable families, who therefore give themselves to the enjoyment of every pleasure and convenience to which their warmer climate and better circumstances invite them. Throughout, there prevails here a finer manner of life, and on the whole there are more evidences of courtesy than in the northern cities. I had already been told this at Philadelphia, and I found it to be the case; just as in general on the way hither, the farther I travelled from Pensylvania towards the southern country, there were to be observed somewhat more pleasing manners among the people, at least there was absent the unbearable curiosity of the common sort, which in the more northern regions extends to shamelessness and exhausts all patience. There is courtesy here, without punctiliousness, stiffness, or formality. It has

long been nothing extraordinary for the richer inhabitants to send their children of both sexes to Europe for their education. The effect of this on manners must be all the greater and more general since there were neither domestic circumstances to stand in the way nor particular religious principles, as among the Presbyterians of New England or the Quakers of Pensylvania, to check the enjoyment of good-living. So luxury in Carolina has made the greatest advance, and their manner of life, dress, equipages, furniture, everything denotes a higher degree of taste and love of show, and less frugality than in the northern provinces. They had their own playhouse, in which itinerant companies from time to time entertained the public, but it was burned some time ago. A like misfortune overtook an elegant dancing-hall. A French dancing master was the promoter of this building; the necessary amount was advanced him by the first minister of the town who not only had no hesitation in a matter of furthering the pleasure of his parishioners, but afterwards when the property fell to him, the Frenchman being unable to return the loan, made no scruple of receiving the rent; whereas in the New England states the bare thought of such a thing would have disgraced any minister. Pleasures of every kind are known, loved, and enjoyed here. There are publick concerts, at this time mainly under the direction of German and English musicians left behind by the army, for as yet few of the natives care greatly for music or understand it. A liking for exclusive private societies, Clubs so-called, prevails here very generally. There are as many as 20 different Clubs, and most of the residents are members of more

than one. These social unions give themselves strange names at times, as: Mount Sion Society, Hell-fire Club, Marine Anti-Britannic Society, Smoaking Society, and the like. All the games usual in England are in vogue here. As regards dress, the English taste is closely followed; also the clergy and civil officers wear the garb customary in England. The ladies bestow much attention upon their dress, and spare no cost to obtain the newest modes from Europe. Milliners and hair-dressers do well here and grow rich.

Charleston, at sundry times and by opposite elements, has been threatened with complete destruction. A great part of the town has several times gone up in fire, and with a loss of considerable stores of merchants' wares. Again, violent and lasting hurricanes have seemed as if certain to destroy the place. The low situation of the town exposes it, if north-east storms hold somewhat long, to the danger of furious overflow, these winds checking the northwestern course of the gulf-stream flowing along the coast from the Mexican gulf, and driving it and other water of the ocean against the flat coast of Carolina. From the same causes also the two rivers flowing by the town are checked, and in a very brief space the water often rises to an incredible height.

In the item of weather Carolina is subject to the same changes as the rest of the eastern coast of North America; warmth and cold, fair and rainy days are the effects or consequences of the winds. The Northwest spreads cold over this southern region as over all the coast besides. In January and February 1784, the time of my stay at Charleston, the weather was

almost regularly cyclical, as follows: North-east winds brought cloudy weather and rain—until, commonly, the wind changed of a sudden to north-west, and there was clear, dry weather; if the wind held in this quarter or blew strong, there was more or less cold.* The north-wester is generally followed by milder winds from the West, which gradually work more around to the South, until finally the winds are hardly perceptible from the South, or there is calm, during which time the weather is fine and warm as a rule, until the wind rises again from the east or the north-east, the weather changing in a similar way. This same succession of winds and weather holds pretty well throughout eastern North America, if there is no disturbance from extraordinary causes. The north-east winds always rise first in those parts most to the south, and show their effects later and later in the more northern provinces. One may convince himself of this by following every account given in the publick prints of violent storms from that quarter and the damage done shipping along the entire coast; it will be found that a north-east storm is remarked earliest in Carolina or Virginia, then in Pensylvania, next in New York, and often a day later, or even more, in New England.† Towards the end of January and in February we had this year mostly very cold weather. The thermometer often fell to 24, 26,

* "For Carolina and Florida higher mountains would be of "advantage and a protection against the cold north-west "winds." Molina, *Storia naturale del Chili.*—For more regarding the state of the air, winds, and climate of South Carolina, Vid. Chalmers, *Account of the weather & diseases of S. Carolina;* Preface.

28, and almost every morning it was at least 32 by Fahrenheit. But this was an extraordinarily cold winter, of no common severity also in the higher middle provinces—on the other hand, the most northern regions, as Nova Scotia and Canada, enjoyed a winter quite as uncommonly mild. Here at Charleston there was ice to be seen every morning on shallow water and ponds, and in the houses. The poor negroes, who can bear cold by no means well, crept about stiff and sluggish, whereas in the hottest weather, when the European is relaxed without strength, they are brisk and industrious. But of snow there was none; however in the year 1776 it fell a foot deep, and lay nearly a week. Chalmers, from 10 years' observations, gives the lowest station of the quicksilver at 18 Fahrenh. and the highest at 101 in the shade; but he mentions that the quicksilver had once been known to fall as low as 10 Fahrenh.; certainly extraordinary for so southern a place. Such cold and frosty days are rarer in customary winters, and never hold long without a change to warm days; at any rate, only the evenings and mornings are so cold, the midday sun soon giving the atmosphere a pleasant warmth. During these cold days of January and February, in the neighborhood of Charleston not an indigenous plant was to be seen in bloom; for in this climate spring does not really come before the middle of March or the beginning of April. But in sundry gardens the following European plants might be found greening and blooming:—*Alsine media—Lamium amplexicaule,—Leontodon Taraxacum,—Rumex crispus & Acetosa,—Poa annua,—Vitica dioica* and *Sonchus arvensis*. Of garden-flowers there were blooming at this time narcissuses and jon-

quils. Also the orange-trees, which are everywhere in the houses and in the open in gardens, seemed to be standing the severe weather pretty well; they were full of fruit and burgeons. But often they are frozen, and this is not seldom the case even to the south, at Pensacola in Florida. There it has been found at last by experience that the best means of guarding these trees against the injurious effect of great winter-cold or northwest weather, is to take away the earth from their roots at the approach of winter, exposing the whole tree so that all its parts may be subject to the same temperature. Not one tree died that was handled thus; but those from which the earth had not been removed from the roots cracked and died. A palm-tree, 7-8 feet high, standing out in a garden, suffered from this weather and its leaves hung slack. Several other trees from warmer regions, such as *Croton sebiferum, Sapindus Saponaria* &c, which hitherto had withstood the cold well in the open, it was feared would this time hardly escape damage. These and other tender plants which Carolina has in common with the West Indies, either naturally or from transplantation, thrive only on the sea-coast where in comparison with the inland country milder and more temperate weather prevails generally. Some 60-80 miles inland from Charleston snow was seen to fall during this time more than once. The variable winter-weather often gives rise to inflammatory diseases which at other times are less frequent in this region, and require bleedings neither powerful nor often repeated. Carolina is in the spring a paradise, in the summer a hell, and in the autumn a hospital. The more oppressive months are June, July, and

August, during which the Fahrenh. thermometer commonly stands anywhere from 70 to 90°, and not seldom rises to 96 and more. The summer-heat, in itself, is more overpowering on account of the calms usual at that season and the little circulation of the air. To be sure, few summer-days pass without violent thunder-storms to set the air in motion and for a short time cooling it, but the pleasant effect is soon gone and the oppressive, sweltry heat again has the upper hand. At Augustine and along the whole of the east coast of Florida there is vastly less cause to complain of this still, heavy heat, although that region lies nearer the sun. But the nature of that country, which is low and extends in the form of a tongue of earth into the West Indian waters, brings about a freer and more refreshing passage of air from sea to sea, which cannot be the case in the situation of Carolina. Besides, there must be taken into the account the immeasurable forests which cover the interior of the country, the upward rise of the land from the coast inwards, and the absence of large streams penetrating into the interior, all which circumstances are unfavorable to movements of the atmosphere.

Pleasant regions or diverting changes of prospect are not to be found about Charleston; + the whole landscape is flat and sandy; tracts next the sea and the rivers are swampy. The greater part of the forecountry is taken up in pine-forest. Of these pines the following four varieties are the commonest.

1. The **Pitch-pine.*** It has 3 needles in each sheath, always assembled tuft-wise at the extreme end

* *Pinus palustris. Mill.* Duroi, P't II, 49, No. 8. v. Wangenheim, *Beyträge,* 73.

of the branch, the rest of the twig being bare, if the tree is mature. Young trees, two and three years old, have needles 12-15 inches long, which stand upright at the top of the trunk and give it a peculiar and splendid appearance. If the trees are older the needles are from 7-9 inches long, and each needle shows 3 sharp, slightly dented edges; the outer side is rounded, the two inner sides are flat, so that the 3 needles fit exactly together and form a long, thin, cylinder; they are, for the rest, straight, or only a little twist, the same breadth throughout, and but a little pointed at the end. The young trees grow no side-branches until they are 4-5 years old and 5-6 ft. high, retaining until then their long, beautiful, upstanding tuft. The cones of this variety are 6-8 inches long and glisten with the plentiful resin they sweat out. Each scale has a rather wide eye, with a small, sharp point in the middle. The trunks grow tall and strong, and their bark is smooth.

2. The **Loblolly-pine.*** It has likewise 3 needles in each sheath, and similar to those of the first, except that each needle is somewhat twisted. In young saplings the length of the needles is not more than 5-8 inches, in mature trees, not more than 4-6; but they are not, as with the pitch-pine, found only at the ends of the twigs, clothing them as a rule entirely. Also the branches stand up more and are shorter, whereas with the foregoing variety the half-naked boughs spread more out and hang somewhat. Their cones are like the former, but shorter. The bark of the trunk is rough.

3. The **Birds-nest pine.** This name has been given it because all along the trunk a number of small, round,

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* *Pinus Tæda. Linn.* v. Wangenheim, *Beytr.*, 41.

bushy sprouts break through the bark, and give the tree a strange and, at the first glance, distinguishing appearance. It is further peculiar for growing a great number of small twigs on the south side, and none or very few on the north side. There are two needles in each sheath, not more than 2 to 4 inches long, half-cylindrical, pointed, and slightly dented along the edges. The cones are oval, seldom more than 2 inches long, and each scale set with a small spine. The bark is very rough and broken.

4. The **Smooth-barked pine.** It has 2 needles in each sheath, from 3-5 inches long, of a structure like the preceding. Their cones are also very small, and commonly quite smooth, but are to be distinguished by the very pleasant odor which is peculiar to them. The bark of the lower trunk is somewhat rough, but higher up grows smooth and white, retaining this characteristic and color, by which the tree may be known, throughout all the limbs, an appearance so unusual, especially in the younger trees and branches, that judging by it alone one would hardly suppose this to be a variety of pine. These are the varieties of pine observed by me near about Charleston, to be easily and plainly recognized in loco by the descriptions given. But a special work would be necessary clearly and certainly to disintricate the sundry species and varieties of North American pines and firs, they as it seems, being much affected by climatic and local conditions, and great confusion arising from the arbitrary, indeterminate names given them. Properly to rectify such confusions would require time and an observation of the trees in all situations and circumstances.

In Carolina there are found almost all the varieties of oak which appear elsewhere in North America; but about Charleston and on the near-by islands the following are chiefly seen

The Willow-leaved Oak. Quercus Phellos Linn., the swamp-oak with the willow-leaf. Catesb. I, 16.

It grows to be a strong and comely tree. It is not so common in South Carolina as in North Carolina; it is also found in the more northern provinces, but not beyond Pensylvania, where however it is smaller and holds its leaves only in mild winters, whereas here the leaves are kept as a rule the winter through, although some of them fall.

The Live-Oak. Quercus virginiana Mill. Quercus Phellos. β foliis oblongatis non sinuatis. L.— Cat. I. 17.

This splendid oak grows strong, tall, and handsome. There is a certain difference as between the leaves of young or old trees and limbs, which often gives them the appearance of distinct varieties. The leaves of the young trees, and of the young limbs of older trees, are lance-shaped or oblong and are set with little points at the edge. The other leaves are similar to these in shape, but blunted, the upper surface somewhat wrinkled, the under, downy or white, quite curled at the edges. The Catesbean figure is therefore not precisely exact, showing these leaves smooth, as it does, when they are not. This difference as between the leaves borne in mind, it will be found that the Linnean character of the *Quercus Ilex* will also apply at times to the young trees of this species of oak. In addition there are sundry other variations; sub-varieties appear

with leaves exactly similar as to shape, but smooth and shining on the surface and beneath merely silver-colored, without the least down. The leaves are invariably strong and thick, and throughout the year keep green and vigorous. This oak is not only an ornament in the forest, but furnishes the most excellent and durable ship-timber. A ship built of it, and hence called the 'Live Oak,' was 40 years and more at sea, and was several times new-planked. This oak is to be found most abundantly in Georgia, but there as well as in the Carolinas only on the sea-coast or not far from it; it grows 40-50 ft. tall.

The Highland Willow Oak. Quercus Phellos humilis. γ. *L.,* Catesb. I, 22.

This grows in dry places and is not rare here; but attains only a moderate size. The leaves are lance-shaped, but shorter than those of the first willow-oak, and are smooth on both surfaces; the leaves have several in-cuts and points.

The Water-Oak. Quercus uliginosa Wangenheim. Quercus folio non ferrato, in summitate quasi triangulo. Cat. I, 20.

This oak is pretty common in the southern provinces, as often to be met with as any other. It grows preferably indeed in low, moist, and good soil, but not exclusively, being found also in dry places. The leaves approach in shape those of the common black oak, but are smaller, of a thicker structure, and keep green pretty well throughout the winter.

The other oaks found hereabouts are: the common black oak, the red oak, the red water-oak, the white, and the chestnut oak. Somewhat farther inland there

is the low or dwarf-oak, mentioned already more than once; but of all these none remains green over winter.

Besides the pines and oaks here remarked, the woods and open fields about Charleston are pranked with many other fine evergreen plants, which with temperate winter-weather keep up in some measure the charm of a perennial spring. I have remarked the following:

Ilex Aquifolium, Ilex Dahoon, and *Ilex Cassine L.* All three sorts hold their leaves a lively green.

Olea Americana L. Ligustrum lauri folio &c. Catesby I. 61. The leaves remain a bright green; as also

Prinos glaber L. Cassine vera floridanorum &c. Catesb. II. 57.

Laurus indica and *Borbonia L.* Both, but especially the latter, keep very beautiful, their trunks pretty high and 2-3 feet through.

Kalmia latifolia, angustifolia, and *prostrata L.* The first of these lasts the best.

Lonicera sempervirens L. + does not remain entirely green.

Smilax laurifolia and *tamnoides L.* lose a few of their leaves, but keep most of them and of a good appearance.

Bignonia sempervirens. Jasminum luteum Catesb. I. 53, and another species, *foliis conjugatis,* continue very beautiful if protected in the woods but otherwise not so well.

Magnolia grandiflora, tripelata, and *glauca L.* Both the latter continue only partly leaved, according to the nature of the winter; but the first is literally evergreen, and belongs among the trees of the first rank in this

region, as well for its considerable growth, (trunks 40-50 ft. high and more than 2 feet thick), as for its magnificent, fragrant blooms, and its continually green appearance.

Gordonia Lasianthus. Alcea floridana, Catesb. I, 44, here called Gardenia commonly—holds excellently well.

Hopea tinctoria. Arbor lauri folio. Cat. I. 54. Keeps its leaves green, but somewhat hanging, and shifts them only at the blooming-season. The black cattle in the woods browse most on the leaves and young twigs of this and the *Olea americana,* although both, and especially the latter, have a bitterish taste.

Pyrola maculata, Mitchella repens, Vinca lutea? Cassine Peragua, Rhododendron maximum, Andromeda mariana, and *Myrica cerifera,* all keep very beautiful.

Cactus opuntia shrivels a little; but *Yucca gloriosa, Yucca filamentosa,* and *Agave virginica* continue full of sap.

Orange-trees, planted in the gardens and in the houses, are not originally indigenous, but they hold their leaves although not very fresh. Twenty to thirty miles from the coast they let fall the most or all of their leaves in the winter, as is the case with the lemon-tree even here. Orange-trees left to themselves and gone half wild, arm themselves with long thorns, and are used here and there as hedges.

Among the evergreen plants here, belong also the cabbage-palm (*Areca oleracea L.*) and the small dwarf-palm (*Corypha minor?*) both of which occur only along the coast. ✚

Besides the plants noticed here, there are to be seen many others which keep their leaves a part of the winter, but more or less discolored or changed, and therefore not to be counted among those mentioned. With so fine a store of lasting plants, it would be very easy to have the pleasure of a continual green in the gardens, and to make famous winter-gardens. Many of the European annual plants keep green and in bloom throughout the winter, but in the heat of summer die away, at which time the indigenous annuals begin to shoot, and last through the hot season into September. But gardening is not very much in vogue and is generally left to ignorant negroes. Nor is it very long since all cabbages, pot-herbs, colly-flowers, and other garden-vegetables, were brought from the Bermuda islands to the Charleston market. A skilful English gardener, Mr. Squibb, had first to show the inhabitants that they could abundantly supply themselves if they would only make the necessary changes in the culture of vegetables, which the nature of the climate demanded. For these do not thrive so well throughout the summer as in the spring and the fall, and are to be kept in the open the winter through, green and growing. Root-plants, as radishes and yellow and white turnips, hold their own and grow even during the summer, but far less well than in the spring and the fall.

Of fruit trees they have pears, apples, peaches, plums, and cherries. Apples and peaches, which are not particularly good, are ripe in June. These and other transplanted fruits mature so rapidly that they have not, it may be for that reason, so good a taste as in the northern country. Most of these fruits bloom

twice a year; but seldom ripen the second time. The fig-tree bears 3 and 4 times, in May and June, September and October. There are a few European olive-trees, which do well and yield heavily, but they have not yet learned how to conserve the fruit properly.

Wheat is sown in September and cut in June. Corn is planted in April, and harvested in August.

Although the soil about Charleston, mainly a shell-sand, promises little fertility, there is no lack of remarkable instances showing the rapid progress of vegetation in the same. Warmth and moisture do what the thin soil of itself could not. In a garden outside the city there are pointed out many lemon-trees which at the seige of 1780 were cut down to the ground, and yet by February 1784 had shot up 12 ft. high and 3-4 inches thick. A Tallow-tree (*Croton sebiferum L.*) which had met the same fate, has grown since to 15 ft. and more. The China-root, or 'Smilax China,' here in one year runs out 40-50 feet, winding about the trunks and branches of trees. Often in the woods grape-vines are to be seen which strike their roots in the earth, indeed, but above are slung about the top of some high tree, otherwise swinging quite loose. A climbing shrub of this sort is the so-called 'Supple Jack,' of which I have seen neither leaves nor blooms. It grows a woody, pliant stem, one to two fingers thick and 40-50-60 ft. long, which is often to be found hung from the end of a strong limb, and it is not easily to be guessed how it got there from the ground. I measured a few vines of the *Bignonia sempervirens,* which were also of the thickness of a thumb, and in length 40 and 50 feet; these may be split without difficulty from end to end.

Next to indigo, already touched upon, **rice** is the chief staple of South Carolina. Only this province and Georgia have hitherto cultivated rice on the large scale; for although North Carolina and the southern part of Virginia are in places well suited for this grain, its culture has always been too much neglected there. The greatest part of the rice grown in North America is exported to the northern states of Europe. In the three years 1768, 1769, and 1770 the total export of rice from the southern colonies of North America amounted annually to 140,000 casks which at an average price of 45 shillings sterl. the cask, brought in the sum of 316,000 Pd. Sterl. Of that figure South Carolina alone supplied about 110,000 casks.

The yearly profits from an acre (166 perches) of rice-land may be counted at 8-12, even 14 Pd. Sterling, according as the price is high or low. Hence the taking in of suitable new lands is zealously prosecuted. Rice is raised so as to buy more negroes, and negroes are bought so as to get more rice.

Now and then the charge is made that rice is injurious to the eyes and weakens the sight. In so far as this obtains of South Carolina, another reason might be assigned, namely, the reflexion of the sun's rays from the blinding white sand. This is confirmed by numerous observations, many persons suffering with their eyes who eat little or no rice, and the inhabitants of other rice countries, where the soil is not the dazzling white sand, eating rice with none of these supposed evil effects; whereas, according to Boerhaave, the people of Arabia, Persia, and Egypt, on account of the white sandy soil of those countries, are subject to many complaints of the eyes. Crude rice

was at the time sold at 3 shill. sterl. the bushel, but the husked at 12-14 shill. sterl.

Rice, indigo, and in the back parts, tobacco, have so far chiefly engaged the attention of the inhabitants of Carolina; but from the nature of the climate and the situation of the country, it is to be expected that, population and industry advancing, very many other valuable products may be raised here at a great profit. The olive-tree, the carob-tree, the mastich, the almond, saffron, liquorice, honey, silk, fine wool, and the like, might, by indefatigable effort, be had of an especial goodness and yielding a great profit.

In a country which of itself brings forth such a quantity of wild vines as is the case almost throughout North America, it might be naturally expected that vine-culture would be carried on easily and profitably: and yet this is not so, at least was not so. From the first much wine has been drank in America, and much money has gone out for it to foreign states. Whether wine in general is a necessary article is not the question here. Enough, that people in America find pleasure in it, and greatly desire to partake of it. The produce of North America would not be sufficient to pay for its wine, if it became a universal drink. But then there are many fruitful orchards which yield an abundance of good apple and pear-wine; barley and hops are raised, to brew beer; they distil whiskey, and get rum cheap from the sugar-islands, or prepare it from molasses fetched thence.

The sorts of wine, which were formerly best known and liked in America, came from Spain and Portugal, on account of the trade-relations of those countries with England; that is to say, red, and less often white,

Oporto or port-wine, and then Sherry, Lisbon, Teneriffa, Fayal, and Madeira. Of the last named there was a distinction made between the so-called 'New-york and London quality,' according as the taste was more suited to the one or the other of those cities. Madeira-wine was more prized if it had passed the ocean once or several times, especially if it came by way of the West Indies for it betters by a voyage in warm regions. Formerly French wines came rarely to America, but because of that, so much the oftener now. The considerable sums which were drawn from America for wine, induced the English government repeatedly to set premiums on the raising of domestic wines. Following these encouragements, attempts at wine-culture were made in several provinces, and a little wine produced for test here and there; the purposes of the government were not fulfilled; beyond these few trials, nothing was done, because the work was not found profitable, seemed not to promise greatly, and, as it appears, was not in any way to the taste of the Americans.

A Mr. Andel, + near Brunswick in Jersey, before the war received a premium of 100 Pd. Sterl. for a pipe of red wine produced on his land. He died soon afterwards, and negligent heirs let the vineyard fall into decay, because it demanded too much work. In South Carolina, almost 40 years ago, there was offered by Provincial Act a reward of 60 Pd. to any one exhibiting a pipe of good, drinkable wine made in the country. A Frenchman settled near Orangebourg, encouraged by this, made a few tuns of very good wine, and for several years together received his premium. But so soon as the premiums were discontinued, he

gave up vine-culture, saying that he could find a better use for his land. Another resident of South Carolina, by the name of Thorpe, planted a vineyard 30 miles from Charleston, under the oversight of a Portuguese, whom he had brought in for the purpose. He also received premiums on 3 pipes of wine; but after his death his heirs likewise gave over any further attempts, using the land in some other way. Later, there were other attempts made, in a region called Long Canes, 200 miles from Charleston, and good samples of wine were produced. All those European vines raised in and about towns, as at Philadelphia, Newyork &c., do very well and bear many good grapes. From all the circumstances it is sufficiently clear that America might be a wine-country. But the reason why vineyards have not been set and vine-culture taken up by the farmer generally is the great labor which the tending of the vines requires, and the time that must go by before there is a profit. The American farmer has grown accustomed, after little and easy work, to have in hand his immediate or yearly gains; his wheat and his cattle do this for him; whereas a vineyard, from its first establishment, hardly yields a fair profit in 6-7 years. A number of insufficient reasons have been brought forward to show that America is absolutely ill-suited for vine-culture, but similar statements might be made of vine-countries elsewhere—just as in general the experiments above described prove nothing more than that work, and preliminary expence and oversight were dreaded. I will, however, repeat here all the objections made to vine-culture in America; these may be useful in supplementing and correcting the observations of others.

Late frosts when the vines are in bloom, generally speaking in the spring. In Pensylvania and New York the wild grape-vine blooms about the end of May or the beginning of June; and the tame, about the same time. In May, and often in June, the nights are at times cold. But the tame vine. it seems, meets with no especial damage, blooms riotously almost every year, and yields plenty of fruit. In Carolina, grapes bloom a month earlier; but often, even in April, there are very cold nights. The thermometer often falls from 80 Fahr. to 40°. But on the whole these frosts are not so common, and occur in other vine-countries as well; in America they do not appear to work any great harm to the vines.

The mildew—this they have in common with other vine-countries.

The great number of insects and birds which are harmful both to leaves and fruit. But this can be said only of the least cultivated parts; about the towns European grapes and vines suffer less, either from insects or birds, and there are precautions that may be taken against both. In Carolina there is a sort of chafer-beetle, called the cock-chafer, which resorts among the vines in May and June especially, and eats off the leaves.

The frequent dews which, in the middle and southern parts, fall in June and July, and are followed by the rapid heating of a burning sun. The moisture among the young grapes being greatly heated by the sun's rays, the berries rot. Experiments have been made at Charleston, to show the likelihood of this opinion. In August water was dropped on cabbage and other leaves, and allowed to evaporate in the burn-

ing sun; everywhere the leaf was touched by water, it lost color and texture, as if blighted. The drops of water had the effect of a burning-glass.

Further, the sudden changes of moisture into warm air, and the severe storms and heavy rains which come at a time when the grapes are about to ripen, cause the berries to burst, spoil, and rot, and those still sound become infected.

Finally, it is believed that the vines grow too much to stalk, which tends to make incomplete grapes and fewer; this is indeed the case with the wild American vines, which have a heavy growth of branches, and the grapes on that account are perhaps less juicy and mild.

But all these alleged obstacles might be avoided, in part by work and attention, and they will in part disappear of themselves with the better and more general cultivation of the land and the clearing off of the forests.

Even if, for one or another reason, the fore-country is not suited to vine-culture, it will certainly be found later that the back parts may be very profitably used to that end, whenever more industrious people become settled there. The fertile hills deep in the interior, beyond the mountains, about Pittsburg and elsewhere, seemed to me to be very well adapted for such use. Also there were to be found in that country various wild vines which bore fairly well-tasting grapes. Here among these hills, of a rich soil throughout, and sheltered from the cold winds, vineyards might be readily set. The hills in the country of the Cherokees also have been regarded as lying very well for vineyards; but the Indians are still in possession, and in

consequence no experiments have been made there. The inhabitants of the new colonies at Kentucky will likely give their attention and industry to this matter.

And probably it would not be fruitless to engraft good European vines on the wild American, or to improve these by cultivation; for they deserve attention and have been left quite out of the account in experiments made hitherto.

In Bartram's garden at Philadelphia one may see a good many sorts of American vines which the elder Bartram had collected from sundry regions; they do very well in this garden, and improve even under the slight cultivation given them. The grapes became larger, juicier, and thinner-skinned; and Bartram the son claims that they bear vastly more fruit than the common grape. Among them is the 'Cherokee Grape,' said to be the best in America. From the leaf, this appears to be most nearly related to the European, or *Vitis vinifera.* Only in parts of Pensylvania and New York are found the *Vitis vulpina* (Fox-Grape) and *Vitis Labrusca* (Wild-Grape); these both make stocks 4-6-8 inches in diameter, and 20, 30, to 40 ft. long, slinging themselves about the branches and tops of near-by trees. They especially prefer shaded, moist, and rich spots, and are scarcely to be found on dry hills. The berries of the fox-grape are the largest, but of a sharp taste, however, the frost makes them enjoyable for children, negroes, and others whose palates are not very fastidious; they are a good deal used for preserving with sugar. The grapes of the other sort are if anything sourer still, but of both kinds very passable fruit is now and then to be had. About Baltimore and in the southern forests gen-

erally there are other wild grape-vines, in no way inferior to these in size and length, of which the small, blackish berries have a rather pleasant sour taste.* Another species of grape-vine, small and very low, is found along the sandy banks of the Ohio near Pittsburg, which likewise bears small, blackish grapes, very good and eatable.

The Charleston market can by no means be called equal to that of Philadelphia, either as regards the plenty or the quality of provisions. Butcher's meat here is neither fat, nor of a good taste, because they are at no pains to fatten the cattle, which is slaughtered direct from the thin pasture found in the woods and swamps. In general the black cattle of the southern colonies are not of the good and large sort to be seen in the northern; they give themselves less trouble in keeping up and feeding a good breed, because they have a plenty of cattle. But of fowl-meat there is no lack, and very good, because fed on rice and corn. And there is plenty of venison; a doe, weighing 60-70 pounds, commonly brings 7-8 Span. dollars. Wild ducks and other water-fowl are often brought in; they are not all to be recommended for their taste; among these are many sorts which America has in common with Europe.

Garden-vegetables are gradually beginning to be raised in more abundance, but a head of cabbage or cole-wort still brings 6d. Sterl. Potatoes are brought

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* I have tasted these grapes but have not seen the vines; this is likely the *Vitis vinifera Americana,* Marshall, Americ. Grove, p. 165; and, like the Cherokee grape-vine, a variety of *Vitis vinifera L.,* which however does not occur farther north.

in from the northern colonies and from Europe; they are little raised here, but battatas (*Convolv. Battat.*) and 'tan-yards' (*Arum esculentum*) in quantities, and gourds, cashaws, squashes, melons, pease, and beans of many sorts. And the nearness of the West Indies brings to this town the manifold enjoyment of the fruits of those regions. Finally, the rivers and the ocean according to the season, yield a great abundance of fish. But at this time of the year, there was little to be seen but mullets (*Mugil Albula L.*).

In the item of fish, there are said to have been disagreeable occurrences here, (although more rarely), such as have been remarked here and there in other regions of North America. That is to say, certain fish, otherwise of sound and edible species, seem at times from some unknown cause to have injurious, almost poisonous properties. Several instances of this sort happened during my stay at Rhode Island, in the summer of 1779. In the family of a Jew, by the name of Meyer, a sea-perch (*Percae species*) was got ready for the table, this being commonly one of the best and most gustable fishes of those waters. A short time after the meal was over most of the family, but especially those who had eaten of the liver of the fish, were seized with giddiness, head-ache, nausea, and gripings, with some fever. A sort of rash appeared on the skin, and the outer skin peeled. Emeticks were given, and after a day or two the patients recovered. The same thing happened, at another time, with a German officer's mess, and from eating the same kind of fish; the symptoms were milder because they had eaten less, but in this case also those who had had any

of the liver were the most severely attacked. The inhabitants of Rhode Island know of a good many such instances. But every year thousands of this sort of fish are eaten, being especially sought for on account of their goodness, and no bad effects are experienced, hence the people do not know what cause to assign for these particular instances. The opinion is pretty wide-spread that such fishes have fed on sea-plants growing at the bottom of the ocean or on 'copper-bottoms' along the shore. But this is nothing but an opinion; for it is not at all known for certain that these fish feed on sea-plants, or that the waters of that region have copper-bearing bottoms. The likelihood is that such fishes have sickened from some special cause,* and that their livers in such circumstances show especially injurious properties. That this organ

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* "The particular food that fish get at particular seasons "and places gives them at one time harmful properties which "at another they do not possess. There are coral-eating fish "in the East Indian waters which cause grievous effects if "caught and eaten at the season when they are beginning to "work among the polyps hidden in the madrepores, and these "they are gluttonous after. This season is in January, Feb-"ruary, and March." This observation of Sonnerat's is confirmed by Meunier; the latter adds: that these polyps are of the nature of several species of sea-nettles (*Medusae, Holothuriae &c.*) which if taken in the hand, cause a burning on the skin; hence it may easily be conjectured that the sharp juices of these polyps infect such fish as eat them with a similar burning sharpness. Rozier, *Sammlung,* II, No. 22 & 23. Of these medusae and holothuriae there are a number in American waters, and it is deserving of more exact confirmation whether they do not give rise to harmful changes in fishes.

in many other fishes is susceptible of particular corruption, although the rest of the meat may be sound and edible, is a fact confirmed by the pretty general prejudice among sea-faring men against the livers of most sorts of fish, for instance, the story of the liver of a tetraodon on Cook's ship in the South Sea. And it is worthy of remark besides that very generally, after eating these unsound fish the skin is attacked, and almost always a sort of rash with scaling follows, and that this is also commonly the case after eating a kind of unwholesome muscle found on the coast of Holland.

The country about Charleston, and for many miles around, being quite bare of stones, what is needed must be brought from a distance. Most often they use for foundations, and even for entire houses, a shell-sand stone from Bermuda. It consists altogether of crushed shell-particles, as a rule no larger than millet or poppy-seeds; it is white and friable, but absorbing moisture, grows firmer in the air and durable; and this is furthered still more by giving it a coating of sand and lime. These stones are brought hither in pieces 18 inches long and 6 inches thick; 100 cost 12-13 Span. dollars (à 4 sh. 6d. Sterl.). European vessels, especially the Dutch at this time, bring in bricks as ballast, and sell them at a profit. Near by Charleston all the materials necessary for bricks might be had, but so far nobody has gone about making them, because they are to be had cheap enough, and the workmen needed could be placed to better advantage in some other way. The hilly and mountainous country produces stone in plenty, and there are the

most hopeful indications of other useful treasures of the earth. Iron has already been found in quantity, and lead also; but as yet there has been no particular use made of them. Swamp-ore is abundantly found in the rivers and drowned regions of the back country. Of mineral springs only a sulphur water is known, somewhere on the boundary of South Carolina.

Between Charleston and the ocean lie several islands which help form the bay and the harbor. Those become the best known during the last war are: Long, Sullivan's, and James Islands. On James Island, which is of considerable extent, there is placed Fort Johnson, for the protection of the harbor; the irregular works, of no particular strength or compass, are run up of oyster-shells and lime. They were in part blasted by the Americans themselves when they abandoned this fort in 1780, and storms and waves have done for the rest. There were there at the time only 3 cannon, and a guard of a dozen invalids, to hail in- and out-going ships, examine their passes, and make signals to the town, whenever a vessel is sighted coming in; for the fort standing on a high bank, there is an open prospect to the city, 3 miles away, and also out to sea. From the fort there extends along the shore a long bank or wall of oyster and other shells, cast up by the water. Next the fort it is at least 4-5 ft. high and almost as wide; farther off, it diminishes by degrees. I could not learn whether beneath the surface of the earth there are to be found shells or their remains; for there is no occasion to dig deep, unless for water, which is to be found at a slight depth on this island and pretty good.

In the middle of February, one small plant excepted,* not a bloom was to be found on this island, although in other winters (mild as this was severe) one plant or another is at this season in bloom. I looked about, to no purpose also, for the 'Cabbage-tree,' which was once plentiful there, but now is as good as exterminated, because everywhere cut down during the war for fortifications and bulwarks. But there are a few still left on Morris and other neighboring islands, whither I had no occasion to go. The trunks of this palm-tree are excellent for breast-works; their fibre and whole structure being so soft and flexible that no ball can go through, and besides they do not split. They last but a few years exposed to the air, and hence are for temporary use only. The works on Sullivan's Island, which the English men-of-war grew weary of firing upon at the first attack upon Charleston in 1776, are built largely of these; as also most of the works in the city on the Bay side.

* *Houstonia pusilla*—Radix fibrosa, tenuis. *Caulis* pollicaris, acute tetragonus, setulis paucis (microscopio tantum observandis) scaber, simplex vel subramosus, terminatus ramis duobus et pedunculo intermedio, aut hoc tantum. *Folia* opposita, petiolata, ovata, basi apiceque acuta, glabriuscula, margine reflexo ciliata. *Petioli longitudine* fere foliorum, membrana laxa coadunati. *Pedunculus* terminalis, caule sæpe longior, tetragonus, erectus. *Flos* longe minor, quam Houstoniæ cæruleæ, erectus. *Calyx* parvus, basi hemisphæricus, quadrifidus: laciniis lanceolatis, acutis, erectis. *Corolla* infundibuliformis. Tubus calyce duplo et quod excurrit longior, medio incrassatus. Limbus tubo brevior, quadripartitus: laciniis ovatis, acutis. *Stamina* 4 in medio tubi corollæ; Antheræ flavæ. *Germen* compressum. Stigma bifidum. In habitus this is the *Houstonia cærulea,* and the bloom is so similar I take it to be a variety of *Houstonia,* although I have not seen the fruit.

There are many other uses for which this palm serves, ropes, for instance, and nets made from the soft threads of the leaves, and it is well-known that its topmost point, green and conical, may be eaten, composed as it is of soft undeveloped leaves; hence the name cabbage-tree. Raw this substance tastes a little bitter, something like an almond; boiled it is said to be like a cabbage; but it is mostly put up in vinegar or used as a salade.

Nowhere are buzzards to be seen in such numbers as in and about the City of Charleston. Since they live only on carrion, no harm is done them; they eat up what sloth has not removed out of the way, and so have a great part in maintaining cleanliness and keeping off unwholesome vapors from dead beasts and filth. Their sense of smell is keen, as also is their sight; hence nothing goes unremarked of them, that may serve as food, and one sees them everywhere in the streets. There are those who believe that if a buzzard lights upon a house in which an ill man lies, it is a fatal sign for they imagine the bird has wind of the corpse already.

The martins (*Hirundo purpurea L.* Cat. I, 51) appeared here as early as the end of February whereas in Pensylvania and York they seldom show themselves before the beginning or the middle of April. The people like to see them about their farms. In the northern parts they set up little houses for them, before the barns or on special poles elsewhere, in which they nest; but here they are content to hang up a calabash (bottle-gourd) on a tall pole, and in this the birds take up residence, good protectors always against birds of prey; as soon as they catch sight of one, they be-

gin a noise and warn the chickens and other tame fowls.

Of the Cherokees, who live to the west of South and North Carolina, there came at this time a party, men, women, and children, to Charleston, on affairs of their nation. Two boys of 14-15 years gave in the street an exhibition of their skill with the bow. At 16-18 paces they hardly ever missed copper pennies often set up for them as reward by the spectators. Their arrows were reeds, hardened by fire at the end or half-burnt, the feather taken from the wild turkey. The bows very simple, with a thong made of buffalo-gut.

In South Carolina, on the river Wateree beyond Camden, there are still living a few families of the Catawba tribe; they number about 70-80 warriors or arms-bearing men. By treaty they are confined to a district of 12 square miles as hunting-range, this lying in the midst of a settled and farmed country. At the present time they are living peaceably and quietly with their neighbors; but before this territory, for which they had shown a great preference, was given over to them by an express statute, there had been incessant conflict between them and the planters, and the planters were generally the aggressors, liking to hunt and fish in the Indians' territory, and having their eye on the land. Some 15 years ago these Catawbas, few as they were, stood up in regular battle against the Carolinians, and fought with much order and determination. The Carolina militia, which had been called out, could hardly be held in unbroken line by the most vehement exhortations of their officers, and it was only after a long and stubborn fight that the Catawbas gave

ground. A certain Williamson was in command. The Indians had an especial dread of him, and according to their custom of giving nick-names, called him 'The Cow-driver.' After the event the Cherokees sent a message to the Catawbas, "you have not fought like "men!" To which they returned answer "you may "talk as your understanding is; but only wait until the "Cow-driver comes among you"—

The middle of February there opened at Charleston the winter-session of the Assembly of South Carolina. Any discreet man may be present at the sittings, and no one can come away without instruction, and seldom any without having been interested. Here speak men without fear of man, without reserve, and with manifest zeal for the best good of their father-land and their fellow-citizens. The form of government of the state of South Carolina, a few small particulars excepted, is like that of the other states. The executive administration of the laws is in the hands of a Governor, assisted by a Lieutenant-Governor and a Privy Council, all these being chosen every other year by the Assembly. The law-making power consists of a Senate and a House of Representatives, elected every two years by the people. The Governor, Lieutenant-Governor, and members of the Privy Council must have lived in the state, the first two ten years and the others five years. Each of these must be possessed of estates of at least 10,000 Pd. A Senator must be 30 years old, have been a citizen of the state five years, and own property worth 2000 Pd. in minimum. A representative in the Lower House must have lived 3 years in the country and own besides property in a certain amount. Eligibility for naming these members of the

government is vested in every **free white man**, who has lived a year in the state, and pays taxes equal in amount to the land-tax on 50 acres. The various parishes and counties of South Carolina return some 170 members to the Assembly, but the City of Charleston alone sends 30. The latter figure is, to be sure, vastly out of proportion, considering the number of people in the city and the country; this was very well known, but the larger number was chosen at the beginning of the war so as to give more certainty of a majority of votes for the war, the inhabitants of the city, for reasons well known, being more inclined to the war and its prosecution than were the country-people. The members from the city are for the most part attorneys, considerable merchants, and others, intelligent and well-informed; hence they are fluent, enterprising, and easily get the upper hand of the representatives from the country, when it is a matter of address and a little intrigue. The full number of representatives is never together; the remoter and poorer districts dread the expence of sending all their representatives to Charleston. But those who do appear, if they have not courage or eloquence enough to oppose matters which might seem to them undesirable or burdensome at home, at least they know their interests enough to refuse their assent at a vote. Thus it is often matter of astonishment, that proposals fall through, the possible use or necessity of which has been urged by members from the city or the hither districts with all the charms of eloquence, and no representative from the hinterland has said anything publicly in opposition. However, they are often a

little obstinate, or even a little suspicious and many a time, in a good cause, it is necessary to influence them by innocent subterfuge. But at times they have good grounds for opposition; this was the case once during this Assembly. It was proposed to increase the land-tax, and to raise it equally over the entire state. Now the rice and indigo-plantations of the fore-country produced vastly greater returns than the wheat and corn-fields of the interior—hence the owners of the former would have felt the increase not at all or very little, but to the latter it would have been an insupportable burden. So they demanded, and with all justice, that the increase in the tax should be reckoned not according to the land's extent, but by its quality and yield.

The revenues of the state of South Carolina for the year 1783 were from the following sources:

2½ per cent. tax on the proceeds of all merchants' goods sold at public auction, and on other merchandize thus sold, negroes, horses &c. The amount of this tax was estimated at 10-12000 Pd. Sterling.

2½ per cent. entrance-duty on all merchants' goods brought into the country, not otherwise specially listed or taxed. Last year the value of all merchandize imported into Carolina is said to have been 7-800,000 Pd; and so this duty might be reckoned at 15-16000 Pd.

Extra entrance-duty on sundry specially fixed European and West Indian articles of trade.

1 dollar, or 4 shill. 6d. Sterling, on every 100 acres of land.

1 dollar head-tax on every negro, without distinction of age. Shortly before the war the number of the negroes was counted at 93,000 head. This number was diminished by the war; however, a a considerable sum is thus raised.

A tax on capitals, as it were, a fixed per cent. of the value of stocks in trade; and a species of trades-tax for professional men.

The revenues from these taxes, which are considerable, were applied to the payment of debts and interest, and to other needs of the state. The 2½ per cent. entrance-duty was to be devoted to the Congress, and although this was really collected in Carolina there was at the time a hesitation whether to deliver the proceeds to the Congress, none of the other states having so done, and several of them having flatly refused, not even collecting the duty.

For the current year 1784 the Assembly has devised 'ways & means' to raise in taxes the sum of 104000 Pd. Sterling if it should be necessary; but provisionally the assessment has been fixed at only 79400 Pd. The tax on negroes was raised from one to two dollars, and it was a question whether 3 dollars would not be more advantageous; especially as the proportional increase of the land-tax from 1 to 2 dollars the 100 acres was strongly opposed by the inhabitants of the back country. These would have less to say against an increased tax on negroes, because in that interior region few or no negroes are used. The civil disbursements of the state amount to about 40000 Pd. Sterling. The Governor alone receives 1000 Pd. salary, and the other servants of the state are paid in proportion.

Besides these taxes coming into the State's treasury, there were still other imposts for the maintenance of the police, city-watchmen, lamps &c. For these purposes especially the revenues were applied which arose from such negroes as worked in the city. That is to say, a licence-badge showing the negro's occupation must be paid for by every master for his slaves or by every free negro for himself. But this concerned only those negroes who hired themselves out or were hired out by their masters. For a butcher 40 shillings a year was paid. For a carpenter, mason, farrier, goldsmith, cartwright, house-painter, fisherman &c, 20 shillings a year. For a tailor, tanner, harness-maker, tin-man &c. 15 shillings. For a sea-man, cooper, shoemaker, hatter, rope-maker &c. 10 shillings. For every other hired negro, not specifically described,—5 shillings. In explanation of this tax levied on hired negroes, one must know that in Virginia, Carolina, Georgia, as well as in the West Indies, this class of men are to their owners an interest-bearing capital, and if the owners have no use for them themselves, they hire them out and live on their wages as is elsewhere the case with horses let. The meanest negro, if he has no regular trade and can carry on no fixed occupation, must earn his keep in some heavy work or as day laborer, and must give in to his owner a certain part of his wages. He may have earned little or much, but he turns in at the least a shilling sterling a day, and besides he must feed and clothe himself. There are various conditions, according to the good nature of the owner and the skill of the negro; but in the average it may be accepted that a hired negro is worth a yearly interest of 15-20 per centum. Thus many idlers place their

capital in negroes and, in the strict sense, are by them supported, living careless on the bitter sweat of the hired.

There is besides a poor-tax which last year was fixed at 12 shillings in the pound of land-tax and negro-tax. That is, whoever pays land-tax and negro-tax to the amount of 5 Pd. sterling, must pay five times 12 shillings, or 3 Pd. additional, to the poor-fund; and a 'Batchelor's Tax,' or tax on unmarried men more than 25 years old, was at the time about to be imposed.

The laws of Carolina are mild, indulgent, equitable. But this holds of all the other North American states; everywhere the laws are apparently draughted by and for none but upright citizens, and hence are often used to good advantage by those whose designs are evil. In order to effect a more rapid settlement of the state and to hinder beginning planters as little as possible, very easy debt laws were enacted. But these advantages are enjoyed as well by persistent, malicious debtors. A debtor in Carolina, so far from standing in awe of his creditor, threatens him with the law which, after suit is brought, allows the debtor a stay first of 3, and then of 6 months. Thus a debtor who puts off his creditor for years with stipulations, fine speeches, and vain pretences, lets the creditor understand, if he has resort to the law, that the law protects him and he means to withhold payment many months, and then perhaps he may be able to make new conditions. So it happens that credit is very dear. Lands are offered for sale at 5-10-15 years' credit, and fetch 3-4 and 5 times as much as if sold for cash money (the scarcity of which is another cause of the

high credit). A negro who might have been had for 40 guineas down, was in my presence bid up to 150 Pd. sterling, at 7 years' credit with interest.

The English merchants being willing and able to give longer and vastly greater credit than the French and Dutch either can or will give, the result is that the greater part of the trade of Carolina falls to Great Britain and would, even was there not a general preference for English manufactures and a fixed belief in their superior goodness.

Notwithstanding the material injury suffered by South Carolina during the war, recovery is more rapid there than in any of the other states; commerce is almost as flourishing and as extended as before the disquiets, and there is every reason to expect further increase.

It is generally admitted, and is a matter of surprize to every incoming European, that at Charleston finer manners and a more tasteful mode of life are unmistakeably prevalent, and if there was need, the fact might easily be proved by numerous observations. And it is quite as certain that this refinement of manners and taste has a positive influence on the opinions, those whose characteristick this is showing on many occasions nobility and magnanimity of thought and conduct. The Assembly had appointed a committee to examine the list of banished citizens and their confiscated property, in order to determine the degree of their offences against the state, and so bring them back again or continue their banishment. Even this investigation was held behind open doors. The opinions of the worthiest and most esteemed citizens and gentlemen of Charleston were to the effect that

all, except those guilty of very serious offences against the state, should be dealt with as gently as possible, they being permitted to return on payment of 10-15-20 per centum of their property, and the sin of their adherence to Great Britain forgiven them. Mr. Burke, Mr. Hutson, Mr. Vanhorsh and many other high-minded and estimable men used all their influence to recommend indulgence, forgiveness, and gentle measures; they desired that only those who in their zeal for the cause of the King had been plainly guilty of murder, or of serious wrong committed in respect to members of the American party, such as fire, devastation, and the like, that only such offenders as these should be deprived of all hope of returning to their homes—and of more than a hundred and fifty on the black list not more than 15 could have been so described. However, the magnanimous views of these many worthy men were opposed by others, of the lower and rougher class, with a veritably raging obstinacy; they breathed nothing but the bitterness of vengeance, and would hear of no forgiveness, although their grounds were neither sufficient nor seemly. I was witness at another time to a noble answer given in court by one of the Judges to the plaintiff who hoped greatly to weaken the argument of defendant by bringing out that he had belonged to the King's party and deserved, like many others, to be banished the country. 'Here before the court, answered the Judge, is no question of Whig and Tory. Your adversary has not been banished; he has thus permission to live here; and in consequence must have the same claims before the court as you to an impartial examination and an unprejudiced decision.' Such opinions as these are all the

more commendable, held and openly expressed by upright men repeatedly, at a time when the blind zeal of the people was still everywhere crying for vengeance, holding it for a crime unpardonable to think in any way different from the crowd.

The laws of South Carolina are no more favorable than those of the other states to distinctions of rank. But even if there are no class distinctions as such, it is observable that many circumstances and conditions have almost that effect, certain members of society being more nearly and closely associated, and to them is tacitly ascribed more or less superiority. America knows no nobility, rather hates the thought of such a thing, and refuses any respect demanded by those whose only claim is that of descent and birth. There is however a class of citizens who by natural gifts, useful acquirements, or wealth, are plainly enough superior to the rest, know how to make themselves influential and regarded in many situations and to maintain their hold, and in many respects think and act precisely as do the nobility in other countries.

At this time discontented officers were to be found here in great numbers. The grounds of their dissatisfaction were valid enough. Many of them had for years devoted health and property to the service of their country, and now saw themselves abandoned to their fate. A Major of South Carolina troops assured me that during the whole of the war he had received no more than 70 Pd. pay in cash money, and that in order to live conformably to his position he had been obliged to sell many negroes, and even land, and as circumstances were, at prices far below the real values. For 2 and 3 years' service many officers had been paid

not a bare shilling, and the settlement of their claims by the state is as far off as ever. Therefore it should not be a matter of surprize if one hears these men let fall words and judgments not to be expected of those who had, one might have supposed, been fighting out of pure patriotism. Was it patriotism alone that put arms in their hands, they would have ample cause to be content and to regard themselves as richly repaid in the self-satisfaction arising from the happy outcome of their war. But besides the honor of being called liberators of their country they desire pay, and loudly grumble at being so put off. How superior then are they to those whom they thought to dishonor with the injurious name of hirelings? In their expressions of ill-will, elicited by the withholding of their pay, they swear that neither they nor any one else would ever be so foolish again as to dedicate themselves to the service of the state, fighting for empty promises, and that if another war should break out after 10 or more years it would be impossible to assemble another army, since the small attention and gratitude given the first would not so soon be forgotten. Moreover it is believed and affirmed pretty generally that the Americans do not show a natural disposition for war and pleasure in military service such as are to be remarked in other nations. Love of softness and desire of riches incline them more to the peaceful and monotonous pursuits of agriculture and commerce. Nothing but a positively hostile attack would in the future move them to take up arms again. These opinions are doubtless mistaken. America, as well as other nations, has men enough who from natural disposition take pleasure in war as war; this may be inferred in

part solely from the very general impulse to fist-fights. However repulsive certain disadvantages and difficulties inseparable from war may be, there is on the other hand so much that is tempting and dazzling that men will never cease to be attracted to the fame-promising enterprises of war. Without being tedious in this matter, I may mention a trifling circumstance, how remarkable it was that those very officers who complained with such bitterness of the losses their military service had brought upon them, showed the greatest pleasure in their military uniform, their cockades, and their swords. Many who had gone into trade, still retained the outward appearance of officers and the title. Even older and serious persons showed this preference. An esteemed lawyer here always appeared in public in black velvet, but with a white cockade to his hat, and a ribbon-knot on his sword, for he had been a General, but was now again managing cases at law. This liking for military show is everywhere a temptation, but in America and among Americans is all the more surprising, since there they profess on all occasions a hatred for soldiers, or wish to appear as if they hated them. It may be that from the difficulty of recruiting the American army, inferences have been drawn as to the disinclination of the people for military service; the number of the people being everywhere still inconsiderable, the means of getting a comfortable support are easy, less tedious than what may be expected from a soldier's life. But when once the population has increased and there is a superfluity of people it will be easy enough to bring soldiers together without any great compulsion.

Besides their complaint *non numeratae pecuniae,* the officers of this state and of all the others were dissatisfied on the ground of the opposition shown by the South Carolina government to the confirmation and spread of the new order of the *Cincinnati.* For not only did Mr. Aedanus Burke, one of the Chief Judges of this state, busy himself to some purpose in a pamphlet addressed to the people, showing that if it was not the object of this Order, at least the certain consequence would be the establishment of a race of hereditary patricians or a nobility—but Governor Guerard also, in his address to the Assembly, pronounced with great vehemence and bitterness against the Order, declaring it highly injurious and in direct contravention of the laws, and of a republican system and manner of thought. It was not possible to check the progress of the Order at large, although they could impose certain restrictions on the South Carolina officers.

The Order of the *Cincinnati* was established early in the year 1783, and rapidly grew in numbers and strength. The generals, brigadiers, all the American officers are members of this society. They called themselves merely "the Society of the Cincinnati," and the Order consists of the Grand or **General** Society and subordinate **State Societies** established in each of the several states and, if necessary, to be subdivided into Districts. Major General Baron von Steuben was chosen as the first **Grand Master,** with the title of President. ✚ The Provincial or State Societies, as well as the General Society, had their President, Vice-President, Secretary, Treasurer, and Vice-Treasurer. An annual correspondence was instituted,

by means of circular letters. The General Meeting of the society is to be made up of officers named for the occasion, and of representatives from the state societies, but no state may send more than five representatives. The token of the Order is worn on a dark blue ribbon, two fingers wide and edged with white; it is a gold medallion with the figure of an eagle and inscriptions relative to the time of the foundation and the services of the Order in saving the country. The name is taken from L. Quinctius Cincinnatus, a Roman general who from the tillage of the land was called to the dictatorship, but after having won laurels renounced all posts of honor and returned to his farm-economy. The purpose of the society, according to its own outgivings, is nothing more than a union and association of the generals and other officers (who have served 3 years) in a society of friends for keeping alive the memory of the Revolution and their own common friendship. And this union is to be maintained so long as, 1) the original members themselves or, 2) any of their male descendants are living, or, should there be none of these, so long as, 3) any of their collateral relatives remain, who might be held worthy of being members and supporters of the society. The members are to have an incessantly watchful eye upon the inviolate maintenance of the rights and liberties of man, for which they—(or their forbears)—fought and bled; further, they are to give thought to the preservation and spread of concord and the national glory in and among the several states; to the preservation of brotherly affection and regard among the officers; to beneficent assistance rendered those officers and their families who by misfortune

may be in need. Each member subscribes a monthly sum towards the establishment of a fund for these purposes; pious gifts also are accepted from other patriots not of the society. Moreover, since at all times there are to be found men in the several states who are distinguished for their talents and love of country and whose opinions may correspond to the views of the Order, it is therefore stipulated that such meritorious and worthy characters be received as honorary members, but only as individuals; and with the condition that the number of honorary members shall not exceed the proportion of a fourth part of the officers or their descendants.

The perpetuation of the Order through male heirs and the arbitrary union of officers in a society which by inheritance and merit should rank above the other citizens of the state, these things could hardly fail to be disquieting, since at all events the object seemed to be the bringing-in of a distinction of class. It is a matter of wonder how in America, where no titles are allowed and the citizens are forbidden to receive titles from foreign states, how here an institution such as this could be projected and go so long undenounced.*

America has been known hitherto as a land given over to the business of commerce; but it will shortly be seen that the sciences and the arts will make good progress there. The war just ended has already

* After Mr. Burke's brief but manly protest ✝ had once aroused the attention and the jealousy of the American states, there was haste to check by adequate measures the confirmation and spread of the Order. Several states declared all members of this Order incapable of holding any office under the government; it was pronounced an illegal institution, now and always to be opposed. The Cincinnati were therefore

brought into activity sundry persons of consequence and of such decided talents that in a measure America has gained in the item of learning, although the war itself interrupted for some time the cultivation of the sciences. Before that period the sons of America, inclined to ease and quietude, could dispense with the trouble of study, Europe supplying almost all the men necessary in public office and affairs. During the war itself the young men were occupied in other ways, and since it was freedom that was being fought for, the education of the young, and learned institutions, could not engage the whole attention of the several governments—and yet in those unquiet times various measures were adopted for the furtherance of the sciences. At Philadelphia, even before the peace, the University was placed upon a better footing, and the Philosophical Society was equipped with a new charter which gave it renewed activity; and other states besides, amid the tumult of arms made dispositions for schools and educational establishments.

Since the time when America was settled by Europeans, who brought with them arts and sciences, America itself has contributed little to the augmentation and embellishment of what it has received. So far it can boast of but one philosopher, one mathematician, and one painter of recognized and emphatic reputation.* I know not whether it can show one passable poet, but

obliged to give their institution a changed form; the article touching heritable rank was omitted, with other items causing suspicion, and it was promised that in future merely personal friendship should be the bond of the society; however the fixed meetings, the treasury and tokens of the Order were kept as before.

* Namely, Franklin, Rittenhouse, and Peal.

among all the branches of knowledge there have perhaps been most conspicuous a few good political speakers and writers.* The former indifference to learning was the more astonishing because the ease and well-being in which so many Americans lived offered them the best opportunity for scholarly pursuits. On the whole, it must be candidly allowed that the inhabitants of America in great part possess good natural understandings, and manifest a better expression of their understanding than would people of similar rank and occupations in Europe. To this there have been contributory the slight effort in severe work, and the ease with which a moderate livelihood could be gained; the equality of class, and the great disposition for clubs in which men of all occupations and standing impart to one another openly and without reserve their thoughts, acquirements, and opinions. The general liberty of the press and of speech has been of especial consequence; and finally, people of all classes have been accustomed to read many useful works of entertainment, newspapers, and journals, by which much information has been spread abroad and prejudice dissipated. These and other favorable circumstances taken together have diffused a general intelligence among the people at large and given them a free use of a keen human understanding; but apparently the effect has not been to arouse a diligence after true learning. The American, unburdened by affairs and without anxieties, has regarded it as unsuitable to devote himself zealously and painfully to the study of the sciences, which brought him no income and were

* Dickinson, Payne, Jefferson, Burke, and others.

not exactly a delight to him. As pastime partly, and partly as immediately useful and necessary in a form of government participated in more or less by everyone, the study of history has been the favorite of those who have wished to signalize themselves by applicable information. Thus has America, circumstances being otherwise equally favorable, on account of its general prosperity, (and consequent indolence), and the lack of causes inciting to emulation, hitherto produced fewer learned men than other countries, where nevertheless genius is oftener restrained by oppressive obstacles or must overcome a multitude of rivals.

Geniuses are as much at home in America as in the old world and in time they will measure themselves with those of the old world.

But before a zeal for the sciences and thorough scholarship becomes more general and America may lay claim in this respect to an equal place with the old world, this new world must first pass through sundry stages of taste and refinement. For a considerable time yet, as hitherto, a moderate share of learning may make and keep the Americans happy and content, and they will long continue to draw the pleasure of a literary entertainment from European authors.

However, since this part of the world has now compassed the goal of its desires, independence, it must in the future find among its own citizens those learned persons requisite for the maintenance of the structure of the state and the good of the community. The Revolution has opened a number of new sources of esteem and honor, and broken divers new roads for diligence; thus the citizens of the new states are challenged to the exercise of all knowledge. America will

have need from now on of soldiers, statesmen, divines, physicians, and lawyers, all of whom must receive the necessary preparation in schools and colleges. America must have historians to preserve the deeds of its sons for posterity; these must be instructed and clear-sighted men if its councils are to be regarded and its arms to have authority. It would be for so many states as these a dishonor if they continued for long willing to see foreigners instructing them in every science, foreigners explaining the nature of their country and investigating for them their natural curiosities. So many diverse and still little known regions offer objects enough, certainly, to tempt the diligent student of nature. Their mountains and mineral veins are little known as yet. The virtues of many plants that promise much are untried. Why should the American scholar, as he has hitherto done, rely solely upon the observations of others, and not study the natural phenomena of his own country? The plan of government of these free states, and their liberty of the press, opens a wide field for orators, for critics, and for the study of man in general. Arts and sciences hitherto have made a better progress and found a more fruitful soil in the northern parts of America. ✝ They had formerly, and still have, many zealous followers among the New England Presbyterians; Boston and Cambridge have always been able to boast of many learned men. And a taste for music, painting, and the humanities generally has long been more widespread there. Next in process of time were the Pensylvanians. So late as the year 1760, Burnaby remarks that arts and sciences were yet in their infancy among them, but he allows them a taste for

music and painting. In the southern provinces the sciences have made the slowest advance. In Virginia indeed there has been a College for many years at Williamsburg; but the teaching formerly went forward very drowsily. In the Carolinas so far there have been only the most ordinary lower schools, and no colleges for the instruction of the young. But now the necessity for these is felt, and at this sitting of the Assembly a proposal was made to establish an Academy for the higher sciences. Many estimable members supported this scheme with enthusiasm, but they were unable to carry it through. The majority of the votes were on the side of certain other members whose opinion it was that the climate of Carolina is unfavorable to study and that the best course is to send young students to academies abroad. The champions of this opinion were not, like those who made the proposal, learned men by profession; the absurdity of their notion is too evident to need explication. It has not been regarded as unsuitable or idle to instruct their tender youth in the first principles of human knowledge and of religion. If children in this warm climate show a capacity to form ideas, according to their age and powers, (which nobody denies), why should not youths also, with maturer powers of soul and of body, with bodies used in a measure, since native, to the heat and its effects? It would have gone ill with the sciences, if in warm countries opinion had always been as it is in Carolina. Has not every science flourished at one time or another in other parts of the world where there has been exposure to quite as burning a sun? And certainly it has not always been the fault of the climate if scholarship in such

countries has fallen into decay—political and religious causes have worked more to that end. He who would prove that it is difficult or impossible to gain ideas or knowledge in Carolina, must also prove that it is equally difficult or impossible to exercise there knowledge acquired elsewhere. But nobody in Carolina, even on the hottest summer day, hesitates to ask advice of his physician or to expect a just verdict from the Judge. Even if, what I willingly admit, the enervating heat of the summer months proper is unfavorable to protracted and deep reflection, it does not follow that the hindrances of one or several months should form an excuse for the whole year. The establishment of a college at Williamsburg has not been found unfit owing to the summer-heat, which can be little less than that of Carolina.

However, to contribute somewhat to the encouragement of the young, the Judges and the Superintendent of Charleston have undertaken the instruction of a few young persons, who under the eyes of these meritorious men exercise themselves once in the week in extempore speaking and in disputations upon all manner of questions of law. Young men who wish to be admitted to the bar have no other recourse but to follow for several years the teachings of some lawyer, and then they must occupy most of their time with useless copying, and learn little more than the forms; and so they become passable attorneys perhaps, but not genuine lawyers. A reading-library here, which was scattered during the war, has lately been re-established with a gratifying enthusiasm.

The people of Charleston live rapidly, not willingly letting go untasted any of the pleasures of this life.

Few of them therefore reach a great age. On the list of banished royalists was an ancient of 70 years, who had lived 40 years in Carolina. This was generally allowed to be so rare a phenomenon that for his grey age alone he was permitted to return, although there were many complaints and complainants against him.

The numerous fevers which every summer and autumn so generally prevail, sparing but few, are enough in themselves to ruin by their repetition the strongest constitutions; besides it is likely that the rather free use of strong drinks, especially among the working class, is greatly contributory to the shortening of life. Many of the residents here are attacked almost every year by intermittent fevers, and others escape them only by the quantity of China-bark which they take as preventive. It has become almost the mode to be always chewing China-bark during the fever months, or at least to swallow daily several doses of it. On the other hand contagious diseases are rare; a pest or pest-like disease is as yet unknown in America.* "We Americans, says Franklin some-" where, are all healthy and preserved from corrupting " maladies because our houses stand separate and are

* Hydrophobia, as a consequence of the bite of mad dogs, seems likewise to be unknown as yet in Carolina; at least it had been observed by none of the physicians with whom I talked; however it is stated by others that there have been one or two cases in the country. According to Condamine this grievous malady is also unknown in South America,—and in the other parts of North America it is extremely rare.—More circumstantial accounts of the diseases of this region are to be found in Chalmers and in another publication, *A short description of South Carolina, with an Account of the Air, Weather & Diseases in Charlestown.* London 1763. 8.

"all surrounded with trees." Under this zone, the male sex is exposed to more, and more dangerous, diseases than the female, or rather the men expose themselves to disease, because they permit themselves vastly more extravagances of all sorts and give a freer rein to their passions. Men therefore die frequently in the bloom of their years and leave behind for others young and rich widows. Most of them hasten their death by the incautious use of spirituous drinks, in which they seek refreshment and fortification against the relaxing effect of the hot climate. Carolina would be for many a toper a loved country; it is the doctrine here that during the warm months one should think and work little, and drink much. A very moderate and restricted use of fermented and spirituous drinks in hot regions seems certainly to be of advantage as a support to the natural powers. But unfortunately it is both here and elsewhere in America the prevalent misconception that a free use of such drinks in warm weather prevents debility and cools the body by an increased evaporation; whereas the effect is to augment the exterior burning heat of the sun by an unnatural internal fire, to give rise to dangerous fevers and inflammations, and through an immoderate sweating to consume the best juices of the body. Patriotic physicians in America fulminate against this noxious custom, and it is to be wished that their philanthropical representations may make an impression, and check the fatal abuse of these drinks, beneficial in themselves if employed with adequate restriction and prudence. Dr. Rush of Philadelphia asserts that half of those diseases, the causes of which are sought in the warmth

of the weather, are rather to be explained by the misuse of strong drinks, which at that season are gulped down as strengtheners.

The expense for rum, or sugar-brandy, is throughout America very considerable, but especially in the southern parts where no domestic drinks are prepared. The common drink among the people of the middle and northern regions is cyder. The use of beer is confined for the most part to the towns, and only in Pensylvania and Maryland is good domestic beer to be found in the country towns, where the inhabitants are mainly Germans. But nowhere is there a lack of rum and whiskey, or fruit brandy. Rum is in part brought immediately from the West Indies, but it is also distilled in America, in New England especially, from the molasses fetched from those islands; this sort is in quality much inferior to that brought in direct. Imports, to all of North America, of West Indian rum alone are reckoned at nigh 3,000,000 gallons, proof, (not to speak of the use of the rum made in the country and of the domestic whiskey), of the great consumption of this article, which is very little exported to other parts. This heavy consumption of rum is occasioned: by its low price; by the want of other drinks, for which rum and water are substitutes; by custom and predilection, which alas are all too often ruinous to the health; and finally by the prepossession that in great heat, in great cold, and during severe work, this heart-strengthener is indispensable.

The multifariousness of the drinks for which rum gives occasion is great, and to enumerate them all a long particularization would be necessary. I mention

only the most current. *A Dram*—is a draught of rum or other brandy; a *Sling*—equal parts of rum and water; *Grogg*—water with a fourth, fifth, or sixth part of rum; the commonest drink—*Toddy*—water with rum and sugar; *Punch*—water, rum, sugar, and lemon-juice; *a Flipp*—a warm drink of strong beer, with rum and sugar; *a Doctor*—fresh-drawn milk with rum; *Egg-dram, Egg-toddy*—yelk of eggs beaten up with sugar and rum, and thinned with water to the taste; &c. Add to this list, besides, the various domestic and foreign brandies, domestic and foreign beers, cyder, cyder-oil, and the numerous foreign wines which are drank, also tea, coffee, and chocolate, and it will be easily seen that in this country the most hankering palate need be in no desperation for a variety of drinks. The wines again admit of divers other mixtures; from wine, sugar, water, and a little nutmeg there proceeds *Sangry;* from wine and sugar with fresh milk, the beloved *Sillabub* &c.

The condition of the Carolina negro-slaves is in general harder and more troublous than that of their northern brethren. On the rice-plantations, with wretched food, they are allotted more work and more tedious work; and the treatment which they experience at the hands of their overseers and owners is capricious and often tyrannical. In Carolina (and in no other of the North American states) their severe handling has already caused several uprisings among them. There is less concern here as to their moral betterment, education, and instruction, and South Carolina appears little inclined to imitate the praiseworthy and benevolent ordinances of its sister states

in regard to the negro.* It is sufficient proof of the bad situation in which these creatures find themselves here that they do not multiply in the same proportion as the white inhabitants, although the climate is more natural to them and agrees with them better. Their numbers must be continually kept up by fresh importations; to be sure, the constant taking up of new land requires more and more working hands, and the pretended necessity of bringing in additional slaves is thus warranted in part; but close investigation makes it certain that the increase of the blacks in the northern states, where they are handled more gently, is vastly more considerable. The gentlemen in the country have among their negroes, as the Russian nobility among their serfs, the most necessary handicraftsmen, cobblers, tailors, carpenters, smiths, and the like, whose work they command at the smallest possible price, or for nothing almost. There is hardly any trade or craft which has not been learned and is not carried on by negroes, partly free, partly slave; the latter are hired out by their owners for day's wages. Charleston swarms with blacks, mulattoes, and mestizos; their number greatly exceeds that of the whites, but they are kept under strict order and discipline, and the police has a watchful eye upon them. There may nowhere assemble together more than 7 male negro slaves; their dances and other assemblies must stop at 10 o'clock in the evening; without permission of their

* At Charleston a company has been formed for carrying on the slave-trade to the coast of Africa, and in the space of two years since the peace-proposals, some 3000 blacks (to the great vexation of the other states) have been openly brought to this market and sold.

owners none of them may sell beer or wine or brandy. There are here many free negroes and mulattoes. They get their freedom if by their own industry they earn enough to buy themselves off, or their freedom is given them at the death of their masters or in other ways. Not all of them know how to use their freedom to their own advantage: many give themselves up to idleness and dissipations which bring them finally to crafty deceptions and thievery. They are besides extraordinarily given to vanity, and love to adorn themselves as much as they can and to conduct themselves importantly.

The feast of the Sunday is strictly observed at Charleston. No shop may keep open; no sort of game or music is permitted, and during the church service watchmen go about who lay hold upon any one idling in the streets, (any not on urgent business or visiting the sick), and compel him to turn aside into some church or pay 2 shillings 4 pence; no slave may be required to work on this day.

The population in the back parts of South Carolina has for some time been considerably increasing through emigrations from the northern states.* The most remote inhabitants, who in Pensylvania and Virginia are called 'Back-Wood-Men,' are here denomi-

* The rapid increase of the population in this state has induced the government to establish a new town, called Columbia, 140 miles from Charleston, in the interior country, whither the Assembly and the courts of justice are to be removed towards the end of the year 1789. The public buildings are already begun and town-lots were last April sold at public auction for 20-21 Pd. Sterling.—Extract of a letter from Charleston, 1787.

nated ' Crackers '—(from the noise, it said, which they make with their whips when they come to town with their teams)—people to whom the eulogy is not applicable which I have given the residents of the capital.

South Carolina is not, like the other provinces divided into Counties, but into Parishes and Districts. Of these divisions there are at present 31; but they are not all distinguished by determinate names.

The money-basis of this province was formerly very different from that of the others; that is to say, a shilling sterling was worth 7 shillings South Carolina, and consequently the guinea, 7 Pd. 7 shill.; the Spanish dollar 1 Pd. 12 shill. The paper-money made by the state during the war was counted at this value. But the British garrisons brought in the sterling basis again, and this is still maintained, at least at the capital.

East-Florida

It was my purpose, before returning to Europe, to visit at least a part of the West Indies, to which at this time I was nearer than I might ever hope to be again. The prohibition of trade which in consequence of a resolution of the British Parliament forbade at the time or at least restricted all traffick between the West India islands and the United States of America, made it difficult to get passage to those islands from Charleston; for although an occasional vessel slipped out hence bound thither it was only under the pretext of sailing to other parts, and it was not adviseable to risk a voyage in this way, which might involve loss of time if not other inconvenience. There had been no opportunity for some time of getting even to Providence, one of the nearest of the Bahamas. To accomplish my ends therefore I could do nothing but go the roundabout way by St. Augustin in East Florida, hoping to pass over from there under the wind to the Islands or at least to the Bahamas. The spring was gradually approaching in Carolina; I regretted being unable to stay for its beauties.

On board a schooner of 25 tons I left the harbor of Charleston at mid-day the 9th of March; at 4 o'clock we passed the Bar without mishap and got out to sea with a light wind from the north-west.* Our skipper would not have it said of him that he fearfully hugged

* From Charleston, once outside the Bar, it is possible to sail to Georgia between the mainland and the larger and smaller islands along the coast, quite commodiously and safe

the shore, like divers other similar small craft we had in sight. Of conveniences on such small vessels there are few or none; only fine weather and a short voyage can make them bearable. Being out of sight of land, but not more than 15-20 sea-miles distant, we were entertained by the company of numerous water-fowl, dolphins, and medusae.

We sailed along the coast of Georgia, seeing nothing more of the land than the haze above it, or what mariners call the 'loom of the land.' On the third day (the 11th of March) we neared the coast of Florida, and in the evening found ourselves opposite the river St. John's, 30 miles north of Augustin. It was ebb-tide and the water coming from the mouth of the river could be remarked for several miles, by its muddy, darker color; the greener, clearer water of the ocean is set off in a line almost straight. This is the only considerable river of East Florida, if it can be called a river, for there is so little fall in its course that with spring-tides and east winds its waters are salt almost to their source, but often, under opposite circumstances, sweet out into the ocean; generally however there is very little current at its mouth, and hardly any motion is to be observed. The stream reaches deep into the country, is ordinarily about an English mile

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against all dangers of the sea, even in little open boats; from Georgia one can continue the voyage in a similar way to Florida. This is called the inland-passage. Moreover, considerable shalops can take this course, if in the bad season they wish to avoid the ocean, putting in to land every night. The voyage is indeed longer, from the many turns and the uncertain winds, but it is safer. Also from South to North Carolina there is for a good distance the same facility.

wide, and winds southwards so that it flows within 14 miles to the west of Augustin. About its mouth, since Carolina and Georgia were given up by the English, many refugiés have settled and built an extensive place, called also St. John's. A bar lies before the mouth of the river, but there is 15-17 ft. water; larger ships therefore run in here or into St. Mary's river, (which marks the boundary between Georgia and Florida), more easily and safely than anywhere else in this colony.

After another unquiet night, during which a hollow sea with calm flung our little schooner pitilessly from one side to the other, a favorable wind brought us in good time the next morning to the heights before Augustin. On account of the very flat coast it is difficult to find the site of Augustin; ships are often at a loss for several days. The night was warm, but the morning cool and with a heavy dew on land. We stood off and on before the bar, waiting for the pilot, who had been signaled for and shortly came over the so-called **Swash** and at 9 o'clock was on board. Helped by the incoming tide and a fresh north-east wind, the most favorable for entering craft, he carried us well over this dreadful bar, which had caused our young skipper many an anxious sigh all the way from Charleston. The steersman on the other hand, quite in the indifferent manner of an old sea-farer, had been entertaining the small company on board with numerous stories of ship-wreck and loss of life, always concluding with the statement that the bar before us could not be crossed without mortal danger, which was certainly no pleasant augury for those who were coming to St. Augustin out of sheer curiosity. Among the

bars, which are so common on the southern coasts of North America, that before St. Augustin is unquestionably the most dangerous, because the shallowest and at the same time exposed to the total force of the ocean playing upon it. Ordinarily there are but 3, often only 2 channels where it can be crossed, and these at ebb-tide with only 4-4½ ft. of water, and at high tide with not more than 8-9. These channels which of themselves admit nothing but small and light vessels, are besides narrow and crooked, and what is worse they shift so generally after stormy weather, on account of the quick-sand which forms the bar, that a seaman, quite familiar with them, after a brief absence from Augustin cannot without risk take the old course to which he had been used. The pilots therefore, as often as they come out to bring in a ship, must examine the passage anew. Nor will they take a vessel in or out except at flood tide, and the tide must not have reached its height; for in case the vessel fares ill, the rising tide would float it again, unless already broken by the heavy shocks, or those on board might with the help of boards &c. swim off to shore, which is about the only means of escape, since boats can be of no use in the circumstances. It is indeed a fearful thing to hear the wild tumult of these breaking seas and to behold them on all sides foaming and tossing, and it is no comfort, when one's voyage is ended but for a mile or two, to be then exposed to the greatest danger of all, if the port, which is in plain sight, is really to be made. It has become so common at St. Augustine to see ships aground on this bar and this coast generally, that disasters of the sort have almost ceased to arouse sympathy or wonder. After

the surrender of Charleston in 1782, within two days no less than 16 vessels, bearing refugiés and their effects, went to pieces here and many persons lost their lives. In coming in and going out the 'seas' are put to use, 3-4 waves commonly lifting the vessel over the shallowest spots otherwise impassable. But for this, keen attention, great skill, and good fortune must all be united. The wave which is to raise the ship must strike it full, and no other must come against it, athwart for instance, at the same time, else the ship is driven from the narrow channel on to a bank, and soon knocked to pieces or laid over. A great quantity of dismal remains of vessels protrude on all sides from the sand and the water. Shortly before our arrival a pilot who had served this bar for 20 years, went out in stormy weather to meet a ship at the risk of his life. The avaricious ship-master refused to promise the pilot his customary fee; who therefore returned over the bar in his boat, which was capsized by the seas and the worthy man went down with 4 negroes. The skipper was hardly more fortunate; he stranded on the bar, lost his ship, and barely got off with his life. The Spaniards when they settled Augustin had a regulation that as often as a ship approached the **Bar,** to run in, a bell was rung; at this signal some of the inhabitants must put off to the ship in boats, so as to offer all possible assistance in case of mishap on the **Bar.**

It was Spanish wariness to fix the capital of a colony behind a sand-bank which cannot be crossed except at great peril. Inside the bar there is at once good anchorage. There had been lying here for five weeks a brigantine bound for Nova Scotia, the vessel

needing, to pass the bar, a depth of water only to be had at the highest tides; but at such times the wind is not always favorable for clearance.

St. Augustin is said to be one of the oldest towns established by the Spaniards in North America. The houses are built quite after the Spanish fashion, with flat roofs and few windows; here and there the English have houses with more windows, especially on the street side. They also built the first chimneys, for the Spanish formerly were content with no more than a charcoal fire placed under a tapestry-hung table. The town was planned for 4 chief streets running north and south, but only two of them are conspicuously built up, straight indeed but narrow. The best built part of the town is at the northern end, towards the fort. Almost every house has its little garden, of which splendid lemon and orange trees are not the least ornaments. The residence of the Governor, for fear of the Indians, had been fortified by the Spaniards with high walls, and the adjoining garden, with bastions. At the south end and without the town, what was once the Augustinian monastery (for the Spanish in peopling a new-settled colony have first regard to monasteries) has been converted by the English into quarters for officers. Close by are large, extensive, and well-planned barracks for the garrison. The timber for this latter building was brought from New York, as wise a course as fetching the pine flag-staff on the fort from Norway through England to Florida, where they know how to use the best wood for scarcely anything but burning. This flag-staff is said to have cost the government near 30 Pd. sterling, and just outside the town there stand as fine or finer

trees in plenty. A German baker gave us lodging, and with the wife of a sometime Serjeant of the 60th regiment we found board at a Spanish dollar a day.

There are several churches at Augustin, but almost all of them in ruins. One near the north end of the town, in a quarter where formerly certain Indian families were more or less settled, to whose use and edification the church was devoted. Of a German church there stands now but one wall; and the Spanish cathedral church, of St. Augustinus, which was also the principal church of the English garrison and residents, is likewise on the point of falling in. The Spaniards, on their reoccupation, will find enough to do in purging and consecrating it, and in burning all the heretics who lie buried thereabouts. Not far off an association of negroes have a cabin, in which one of their own countrymen, who has set himself up to be their teacher, holds services. They are of the sect of the Anabaptists.

There is a small, but well-kept and decorated chapel belonging to the Minorcans who, after Florida fell to Great Britain, were brought hither at the expense of the government, for the peopling and better cultivation of the land. Although almost all of them left their country in the extremest poverty, the greater part have here risen to good circumstances through their industry and frugality, qualities they are said to possess in a high degree. Among these Minorcans the men dress themselves after the English fashion, but their wives retain their own peculiar head-dress and their pleated braids. It was hoped the Minorcans would introduce into this province the culture of the vine and of the silk-worm, but they have shown no

great desire to engage in the grubbing of waste lands, preferring to make a living in the town. They form very nearly the greatest part of the inhabitants of the place, the rest being a few Spanish still remaining, with French, English, Americans, and—in what part of the world are they not to be found?—Germans. After the relinquishment of Georgia and Carolina the town and the surrounding country received a considerable number of new inhabitants in the emigrant royalists, who however have found no continuing place here, but must go farther if they do not wish to be under the Spanish yoke. Round about the town stand the hastily built cabins of these poor fugitives, walled and thatched with palmetto (yucca) leaves.

The town lies under latitude 29° 50′ north, on a very narrow tongue of land formed by the North River, the Bay, and St. Sebastian's Creek, behind the town. The sole and narrow approach, on the north or land-side, is covered by outworks as well as by **Fort St. John**, which also fully protects the entrance to the harbor. This fort is a high, regular quadrangle, enclosing a spacious court, with 4 bastions, walled moats, and large casemates. It is built wholly of the fine shell-stone common here, which is also the material of all the other stone houses of the town. This stone is excellently adapted for fortification works, being not entirely hard and receiving balls as well or better than burnt bricks. Several holes are pointed out on the east side, made by balls fired across the very wide bay, at the time of General Oglethorpe's siege of Fisher's Island. On the water-side the walls of the parapet are 5 ft. thick, and on the land-side 4 ft., and supplied with 64 cannon-ports.

Under British rule the town was further adorned with a State-house, for the courts and assemblies, the plan of which was handsome but never completely carried out. This served at the same time for a play-house; it is now half in ruins.

The Spaniards in Florida were at one time often troublesome to the southern American colonies, showing great hostility for example at the time when General Oglethorpe undertook to settle the neighboring province of Georgia, which enterprise especially aroused their jealousy. This General found it necessary to make an expedition against Florida, and came without hindrance as far as Augustin, but found that he had missed the best time and was too weak to take the place by force. In retaliation, the Spanish shortly after made a landing at St. Simon's in Georgia, and at a time when the new colony there was in no condition to offer an adequate defence. General Oglethorpe saved himself and the new colony by a happy stratagem. A Frenchman had deserted his small force and gone over to the Spaniards, so much superior in numbers and equipment. General Oglethorpe wrote a letter and sent it to the deserter, but took pains to contrive that it should fall into the hands of the Spanish commander. In this letter he asked the deserter to give out among the Spaniards that the strength of the English was very small. The trick had the desired effect; the Spaniards put no more faith in the Frenchman's true statements, and being apprehensive of a dangerous situation withdrew the next day, without bringing matters to an issue.

It is sufficiently well known that at the Peace of Versailles, 1762, both East and West Florida were

ceded by Spain to Great Britain; the latter power held the possession of these provinces to be necessary as a guaranty of all possible security to its other colonies in America, north and south. As long as the Spanish held Florida there was scarcely any thought given to the tillage of the interior country. They maintained the garrison at St. Augustin, merely to keep their hold on the country, but without drawing the least profit from it. For fear of the neighboring Indians, long objects of especial hatred to the Spanish, no Spaniard dared concern himself with agriculture at any distance from Augustin. The English had long-standing claims upon Florida, on the ground of its discovery by Sebastian Cabot before the country was known to the Spanish. So soon as England came into possssion, all necessary provisions were adopted for the settlement and tillage of the country, and tempting offers were made with those ends in view. Settlers began to come in in numbers, from all parts of North America. The southern situation of the country, however, gave grounds for hoping that the culture of silk and of the vine might be carried on to the greatest advantage. To this end, a company of persons of means in England spent great sums in bringing over a colony of Greeks from the Archipelago, and of Minorcans desirous of emigrating.* Dr. Turnbull who from a

* The government at that time also sent to Florida the widely known and industrious collector, Bartram the elder, to examine into that region. His journal has been published, but against his will. Descriptions of the country have been given by, William Roberts:—*Account of the first discovery & natural history of East-Florida.* London 1763. 8, and Dr Will. Storck,:—*Description of Eastflorida.* London 1769. 4—

long residence at Smyrna had become familiar with the dispositions and the habits of the Greeks, and himself had married a Greek woman, was especially active in this enterprise. He brought together some 500 families of Greeks, or 1500 souls, from the Archipelago, and took them to Florida. They were assigned land 70-80 miles to the south of Augustin, and to the settlement was given the name **New Smyrna.** This colony extended 7 English miles in length; that is to say, there was built for each family a separate house at determinate distances, with a suitable acreage appurtenant.

The recruitment, maintenance, and transport of these Greek families cost the undertakers great sums; but the colonists were pledged to work the land 7-8 years for the benefit of the undertakers, so as to recompense them in a measure for the expence to which they had been put. After that time each family was to have the land, now worked and improved, on lease. It was not found practicable at once to engage largely in vine and silk culture, which were the main objects of the plan, such enterprises requiring a good many years before any profit is to be expected from them. Attention must first be given to the necessary support of these people and to the interests of the undertakers. Maize and indigo were thus the first products had in view, the land being once cleared. But the delicate Greeks were no ways pleased with the unavoidable hardships of subduing wild land. To be sure, for making the work easier the company had provided for negroes who were to be hired out among the Greeks; but unluckily the first ship, bringing 500 negroes from Africa, was wrecked on the coast of Florida and the

whole number was lost. Notwithstanding, a great tract of land had been cleared and the colony was beginning to flourish and yield a profit to both the Greeks and the undertakers when the disturbances between England and the colonies broke out. Misunderstandings arose between the Greeks and the undertakers, some of the Greeks ran off from Smyrna to Augustin, and the Governor of Florida, from the complaints made to him, thought himself warranted in releasing the whole of the Greek settlement from their obligations to the undertakers, and refused the undertakers his assistance in bringing the Greek colonists to order by force and compelling them, in accordance with their agreement, to a continued working of the land apportioned them. The Governor was the more inclined to support the colonists in their outbreak, because he was at a loss for troops, and many of the Greeks were willing to be enlisted. Others resorted to the town, intending to carry on trades and crafts whenever they got liberty so to do; only a few remained at New Smyrna, and the whole colony was as good as broken up. Dr. Turnbull, who up to this time had lived among the Greeks at Smyrna as director, and as a shareholder suffered with the other undertakers a considerable loss, afterwards retired in disgust to Charleston, where I made his acquaintance. ✝ On the ground of his experience he threatened to demand justice in England of the Governor of Florida, Mr. Tonyn. The vines and mulberry-trees, which had been set out by the Greeks, thrived astoundingly. Finding that the grapes, if they hung too near the earth and grew too juicy, were apt to burst, Dr. Turnbull had the vines

supported on high stakes, as is customary in Madeira, and the fruit was greatly bettered.

Besides **St. Augustin,** St. John's is perhaps the only place in East Florida deserving the name of town; for Smyrna was more a rural colony, and the old Spanish town of **St. Marc de Apalache,*** on the Mexican Gulf, has almost gone to ruin. It lies 188 miles to the west of Augustin and, as a place of trade with the Indians, is inhabited and visited by a few merchants. There is a small fort a few miles south of Augustin, on the **Matanza,** where a few men keep guard, this river being connected with the harbor; another small fort, called **Musa,** stood four miles to the north of the town but is now in ruins.

The remaining plantations are scattered singly and sparsely about the country, but extend hardly more than 60-70 miles west of the town. As far as this, and still farther, the whole country is flat and sandy. More inland and to the north it grows somewhat unevener and hilly, but without any elevations of consequence; for the principal mountains of eastern North America come to an end in Georgia. Compared with that along the coast, the interior country is vastly better and more fertile, the coast-land being chiefly a loose, deep, white sand, grown up especially in pines and palms. Now and again are found tracts known as **hammock-land.** These are low places, covered with

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*A company of Augustin merchants proposes, after the change of establishment has been made, to carry on trade at Apalache with the Florida Indians, who desire to have absolutely no relations with the Spanish; they hope to get permission from the Spanish court.

thick forests of tall evergreen oaks and other leaf-woods, and bush; in their natural, wild condition these tracts appear extraordinarily fat and fertile; trees and shrubs stand so close together that they create warmth and give protection against the sharp north winds, and thus beautiful evergreen plants and other tender growths find lodgment here. But no sooner is the wood cut off than the thin layer of black earth disappears before wind and rain, the sun burns up what is left, and then the general white, dry sand remains. Immediately behind Augustin the land rises somewhat above the flat coast proper, but it is still a sand-plain. But on the whole, West Florida is superior to East Florida in the quality and fertility of the land; and on that account many of the planters here have withdrawn thither.

The Spanish had done little or nothing in Florida in the way of tillage; therefore the British colonists who came after found ample work in clearing off the forests; but by making use of the forests, especially the pine, they were able to repay themselves richly for their trouble. Boards, pitch, tar, all manner of ship-furnishings and building-materials were sold in great quantity and at a great profit to the near-by West Indies. It is these articles likely from which Great Britain might expect the largest returns to be made by this colony, if possession was continued. Florida, in addition to the common pitch-pine, has a variety of useful woods: cypress (*Cupressus disticha*), and evergreen oaks in great perfection and plenty, red and white cedar, sassafras, and farther to the south, towards Cape Florida, there are found a rough species of mahogany and other woods commercially useful.

Here and there a beginning has been made in the cultivation of **rice**, the quality of which has been irreproachable but the yields discouraging. The country on the whole is not sloping enough and not sufficiently supplied with fresh streams of water to make this crop profitable. **Indigo** does better, which adapts itself to a barren, dry soil; but there has been no great progress made in its management. However, it is pretty generally accepted that 100 pounds indigo and more can be produced by the work of a single negro slave, which brings the profit from this article, reckoning the pound at 5 shill. sterling, up to 25 Pd. Sterling, besides what the hand must earn in addition.

On the Mosquito river a few attempts have been made with sugar, but so far its culture has not been found profitable or encouraging enough. The cold north-west winds, which at times blow strongly here, check the growth of this delicate plant, and if they do not kill it, at least they cause the yield of sugar to be not answerable to the labor expended; and this culture therefore cannot be carried on so advantageously as in the near-by West Indies. Cold winds and weather are not uncommon here, notwithstanding the very southern situation of the country. Mr. Bartram, who in 1765 went through this newly won province by royal commission, † remarks in his journal that on the 3rd of January of that year there was such extraordinary cold at St. Augustin that in one night the soil along the streams was frozen an inch deep, and all the lemon and banana trees were killed. At this time, in March, we had a few such cool days that within doors a fire was very agreeable. In the Governor's garden attempts were made at divers times with pineapple and

banana plants, but it was always found that most of the winters (in temperature quite as uncertain as throughout the rest of America) were too severe for them.

In war-times Augustin was an advantageous and safe port for the English privateers to slip into; here they could with all ease lurk for the rich Spanish ships coming from the Havannah through the Gulf of Florida. In peace-times many little vessels are busy looking out stranded ships along this dangerous coast, as is the custom also of the inhabitants of the Bahama islands. They have on board skilful divers, through whose efforts considerable treasure in silver and other commercial wares is fetched up not seldom from sunken vessels. Of what is saved in this way from wrecks, $\frac{1}{10}$ must be given in to the Governor. If one living soul is found on board the unlucky vessel, all that is saved falls to the actual owner, and only a certain portion, called 'salvage,' is paid these people. Should there be none alive, the finders appropriate everything, less the Governor's tithe, which is estimated by them on the total value in no very definite fashion.

The Spanish cannot promise themselves any great advantage in receiving back the two Floridas. As formerly, the neighboring Indians, the Musquitoes, Cherokees, especially the Lower Creeks, who live on the Apalichicola and Flint rivers and are the most numerous of this region, will continue their implacable enemies, confining them quite to the garrison, so that in all likelihood the settlement of the country, now well begun, will be abandoned, and Augustin as before will have none but soldiers and monks for in-

habitants. After Pensacola in West Florida was taken from the English, the Indians there showed great hostility to the Spaniards and compelled them to keep within their lines, and they have resolved to do the same at Augustin. The Indians are thoroughly vexed at the cession of the country to Spain. The Cow-driver, an old warrior of the Cherokees, has even assured Governor Tonyn that if **the great man over the water would give them large canoes and land for hunting,** most of the men of his nation would be willing to withdraw with the Governor.

It does not at all appear that the Spanish are in any haste to take possession of Augustin.* Nevertheless, all the preparations are making for the transfer, and ships are continually going out, with goods and passengers, to the West Indies or Nova Scotia. The unfortunate refugiés, who had fled hither from the United States, are placed in the worst position. What little property they could save, most of them have fixed here in lands and houses, which they must now again give up.† For of all these residents few doubtless will be willing to exchange a mild British rule for the Spanish yoke, even was there no question of religion. Only the fore-mentioned Minorcans, from

* The final delivery to Spain was not made until the autumn of 1785.

† The sum of 13000 Pd. sterling has been allowed by the British Parliament, for losses suffered by the inhabitants of East Florida, now ceded to Spain. But no such assistance was given the inhabitants of West Florida which was conquered by Spain, whereas East Florida has been given over in time of peace.—*Hamb. polit. Jour.* 1787. p. 580.

religious affinity, seem for the most part inclined to stay; and some of the Greeks also will likely remain.

The present condition of the province and the temper of its inhabitants, mostly dissatisfied at the unavoidable change, rendered it unsafe to go far from the town. The Governor himself gave a warning in this regard. A few malefactors had taken advantage of the confusions and disorder which the time and circumstances had caused among the inhabitants, (conditions, however, chargeable to the authorities), and were robbing on the roads and plundering houses without let or hindrance. My excursions therefore were confined to the region close about the town, from which besides I dared not get far away, fearing to miss the opportunity of a vessel bound for the Bahama islands and lying ready.

All about the town the sandy soil was thickly set with a low, creeping palm (*Corypha minor L.*?). The stems trailed along the ground, the tops very little raised above the sand but with comely, upright-standing leaves. From every old root there sprouted many stems running in various directions, and striking out fresh roots. Whole fields were covered with this growth. Here and there appeared a few upstanding trunks, of the thickness of a man's leg; from the leaf, these seemed to be the same as the rest; but there being no blooms at this time, no precise determination could be made.

Near to the town there were also to be seen a few trees of the fan-palm variety (*Borassus flabellifer L.*) The cabbage-tree or cabbage-palm (*Areca oleracea L.*) is likewise at home here, but about the town there are few of them left. They had been cut down to get

the cabbage, the undeveloped, tender, white leaves at the top of the tree. This sort of palm grows tall. The edible part is brought into the town by negroes and sold at 6 pence to 1 shilling sterling.

In this southern region spring really begins hardly before the middle of March. A few trees and shrubs begin then to show leaves; the evergreen oak, the cassio-berry, and other winter-green plants let fall at this time their last year's, but still green leaves, since the new are then developing.

In the woods and swampy places there were blooming at the time, among smaller plants: Orontium aquaticum, Drosera rotundifolia, Hypoxis erecta, Viola lanceolata, palmata, and primulifolia, Rhexia virginica, Hydrocotyle umbellata, Utricularia subulata and gibba &c. All, plants which are found as well in the provinces to the north, where however they come out much later. Acorus Calamus was plentiful in the swamps but not yet in bloom. On drier, sandy soils, and protected by palm-bush or garden fences, were found blooming: Jatropha urens, Houstonia caerulea, Cistus canadensis, Veronica marilandica, Rhexia marilandica, Plantago virginica, Lobelia inflata, Antirrhinum canadense, Tradescantia virginica, Commelina communis, Oxalis stricta, Veronica serpillifolia, Verbena Aubletia, Argemone mexicana, Salvia urticifolia.

Among the smaller bush near the town several varieties of the species Andromeda, Vaccinium, the Myrica cerifera, Bignonia sempervirens, Rubus hispidus, Mespilus arbutifolia &c., were beginning to develope blooms or were already blooming.

Prunus lusitanica, which is very common here, showed sporadic masculine and hybridous blooms.

Xanthoxylum Clava Herculis grows here to strong, high trees. Ilex Cassine, Olea americana, Magnolia grandiflora, and other trees seen in Carolina, are more numerous here. Cactus Tuna is everywhere to be found.

In place of other fences about gardens and fields, the palmetto (*Yucca gloriosa*) is made use of here; the tops being cut off and set out along little ridges of earth take root easily and rapidly, grow tall and thick, and with their stiff and prickly leaves make an impenetrable hedge. In addition, their beautiful blooms offer a splendid prospect to the eye, and their sweetish, mucilaginous fruit is said to be a mild purgative. The orchards contain little besides lemon and orange trees. The latter, the sweet as well as the sour, are thought to be especially good, even better than the West Indian. But the sour are the most raised. The expressed juice is sold at 1 Spanish dollar the gallon. Of both sorts there are very strong and handsome trees, yielding annually 3-4-500 oranges. I saw no apple or pear trees, and only a few peach and plum trees.

The Florida star-anis tree (*Illicium floridanum L.*) is found in the neighborhood but is not so plentiful as in West Florida.

In certain parts of Florida the culture of the *Sesamum orientale* has been attempted, and the seed found to be so heavy that a bushel, English measure, gave more than 25 pounds of oil, not only pleasant to the taste but valuable because it does not easily grow rancid.

The few fish which during my short stay at Augustin I observed in the market were: mullets, whitings,

and drum-fish.* The whiting keeps on the bottom, and bites only when the flood or the ebb is half over. Fresh from the water its color is reddish, but changes to divers other colors when the fish is dead or shortly before.

The drum-fish gets its name from a grunting noise it makes in some unknown way. In southern waters it likes the neighborhood of ships, whence its music may be heard, especially at night. Before leaving Augustin, having to lie at anchor several nights, each night we had a numerous company of them beneath the ship, the bottom of which had recently been tallowed, and it was the skipper's opinion that this was the especial attraction to them. The noise they made was unceasing, as if one was answering another from different sides of the ship. It was a short, hollow sound, like the dull grunting of a hog or the noise made by the American bull-frog (*Rana ocellata*). As soon as the flood-tide grew pretty strong, they became quiet. Judging by the sound, it is rather improbable it is made by their rubbing against the ship's bottom, which is the commoner opinion. But what serves them as a physical instrument would be worth looking carefully into.

These waters contain, besides, almost all the fish which appear in Carolina, and many of them are the same as those found in the neighboring Bahamas; nor is there any lack of alligators.

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* *Mullet,* Mugil Albula L.—Whiting, Perca Alburnus L. But is hardly to be classed with the Percae. Radii branchiar. Numero variant. 3. 4. 5. Cirrhus brevis sub Mento. Labium superius protractum. Striae obliquae vix discernendae. Habitus a Percis diversus. *Drum-fish.* Labrus Croniis L.

The Virginia deer is numerous in the woods, running in herds. In the item of quadrupeds Florida seems to be no ways different from Carolina, the same being found in both provinces. I had but uncertain and insufficient accounts of one animal of the mouse-species. Its size is said to be that of a strong rat, it burrows in the earth, and has been often seen with its jaws stuffed. It is found in the interior country, and is likely an unknown variety of this species.

Among snakes almost all the Carolinian species are known here—and, as is to be expected in a new-settled country, they are in considerable numbers.

There is great plenty of birds of various kinds. Many of the northern passage-birds winter here. In the woods the little perroquets (*Psittacus Carolinus*) are numerous. Red or Cardinal birds are often seen; Spanish boats from the Havannah visit the coasts of Florida to catch these birds, which they sell at Havannah and elsewhere for 3-6 Spanish dollars a-piece. In the swamps and along the seashore are quantities of ducks and other water-fowl. The *Alcedo Alcyon, Ardea caerulea* and *americana L,* and also the *Falco palumbarius* were observed by me. On the sand-banks along the coast and in the harbor sat great troops of pelecans (*Pelecanus Fiber L.*), and other water-birds. These pelecans fish commonly only in the morning and the evening, sitting quiet the remainder of the day. There were fewer buzzards to be seen here than in Carolina.

The neat cattle of Florida are not the best, yet the meat brought to market at Augustin is, if anything, better than that of Charleston. No great attention is given here to the keep of cattle. Of pastures there

are none; cattle must either get their own feed from the thin, sparse grass among the palms or in the swamps, or a negro must every day cut in the swamps a supply of reeds and coarse grass and bring it in to the house, if for their milk the cows are kept up. In like manner with horses. Corn-stalks and blades serve for winter feed. In certain regions on the river St. John's, it is said that no cow can live or keep sound much longer than 12 months. The exact reason for this has not been made out, but it is believed the trouble is due to some injurious plant. Swine, demanding the least care and attention, thrive here excellently well, feeding on acorns and chestnuts and roots. At the Governor's farm was a Chinese hog (*Sus Scrofa chinensis L.*) which by its short feet, hanging, dragging belly, and softer bristles was distinct from the European breed; it had been brought from the East Indies by a ship returning thence.

The so-called **North Beach** is a peninsula to the north of Augustin, extending 4-5 miles. The North River divides it from the mainland; it is a dry, barren sand, mostly covered with young evergreen oaks and creeping palms. The sand along the shore has been bleached by sun and water to such a dazzling white that it is painful to the eye to look long upon it. It is raised by the merest breath of wind and blown about like snow. On the sea-side the waves have thrown up a wall 6-9 ft. high, which looks to be an artificial wall and runs from south to north. Behind this dike there is low, broken land, in which many little bulwarks or hills are to be distinguished, cutting across from east to west, and making different divisions as it were. Along the rivers and brooks, as far as the tide reaches

inland, are found extensive oyster-beds, which here and there at the ebb are quite exposed. At such times it may be seen that almost all of them are set upright, in heaps one over another. Where trees stand close to the water, or their roots are washed bare at the edge of the stream, it happens frequently that oysters are found thick set upon them; for it is indifferent to the oyster what the nature is of the solid body to which it fastens. They are so closely fixed one upon the other, that the lowest and innermost cannot open without setting the rest in motion. These creeks and salty swamps are favorite haunts of raccoons, which there feed on fish, crabs, and oysters.

The immediate ocean shore consists of quartz-sand, mixed with shells broken very small; the surface, from the incessant wash of the sea, is firm and smooth, like a threshing-floor except for the slope. If, by length of time and such a binding as the mixture likely gets from the sea-water, the whole mass becomes hard, then one has the so-called shell-stone which is at present dug on **Fisher's Island**, and used in buildings.

This North Beach extends towards the south in a long point, and where this ceases to appear above the water the sands or shallow banks begin, giving rise to the breakers among which the tedious entrance to the harbor must be sought. But parallel with this point, from south to north, there runs at a moderate distance the northern point of Fisher's Island, (or Anastasia Island with the Spanish), and between them is a channel of deep and quiet water. These points are so low that from the town one can see out over the Bay, across these points, the channel, and the breakers, having an open view to the ocean on the east. How-

ever, the breakers, incessantly moving, may be seen from the town, the great, long, white, foaming waves rising gradually from out the distance until, to the south, they strike upon the shallowest spots and spring high. With the tide and an east wind the water is most disturbed and dreadful, and then the unbroken roar may be heard at a great distance.

Augustin is very like a mouse-trap; once inside, and it is difficult to arrive there, one is at a loss to know if he can get out and how. Ships often lie 8-14 days before wind and weather admit of passing the bar. On the 24th of March ✝—I went on board a sloop, and it was not until the 29th of March that we had an opportunity of leaving the harbor. Our small vessel was crammed with people and cattle, luggage and household furniture. Our two seamen were negroes; and we carried a parcel of black women and children, being sent to Providence to market. We lay at anchor opposite the light-house, on Anastasia Island. This is a solid, stone building, in the manner of an ancient Moorish castle, with ports and battlements. But of the tower the upper part is merely of wood, and so decayed that it shakes with the slightest wind.

While we waited for wind and weather I visited the island several times. Along the beach there is a very fine, wide, and level promenade which, in appearance and nature as here, is said to extend almost the whole way to Cape Florida, of which the southern point is called 300 miles from Augustin. The inhabitants foot it along this beach to Mattanzas, Musquetoes, Cape Canaveral, wherever they please, in all commodiousness; there is difficulty only at inlets and small streams where there is no means of being set over (a planta-

tion, say, or fisherman's cabin) and the passenger cannot swim. Such a beach is a splendid sight—the dazzling white sand makes the distant view like a field of snow; the sand is very fine, so that a breath of wind traces furrows in it, smooth and gently sloping to the water; hard by the water like a threshing-floor; the noise of the playing waves—everything contributes to make the prospect agreeable, on one side a boundary of beautiful green bush. The waves of the sea commonly come rolling in-shore in three gradations one after another, each half a foot to 1 foot in height, and seeming to be vertically defined. The last always advances with the strongest thrust. Few or no shells are to be found on this beach. This cannot be said of the dismal remains of ships. Without the least overstatement I daresay that every 100 paces, almost, the skeleton of a foundered ship, or its wreckage, may be seen. Who could pass this way without emotion—if one imagines to himself the terror so many souls must have suffered here, and the lives that have been here lost. The estimate is that every fortnight, or every month at least, a vessel is wrecked on this coast. I saw several of these skeletons far off from the water, at the highest part of the beach, and buried deep in the sand. A very little more, and they would be wholly covered. Should the sea withdraw after centuries, it would be an astounding thing to come upon the reliques of these ships, enclosed doubtless in the hardened shell-stone, into which, as I have observed, the sand of these shores gradually changes. On this island one sees many places near the beach where the shell-sandstone has been dug out for buildings. Exposed to the air it hardens still more. The stone has

a very fine appearance, and from small fragments one can very nearly determine what varieties of shells entered into the composition. In the quarries it is seen that the stone is in layers. It is hardest at a depth; but the uppermost couches are still so soft that they may be rubbed to sand with the finger. This stone is found here almost anywhere a few feet beneath the surface; how far down it extends, nobody has investigated. In the light-house a well has been dug through this shell-rock, and the water is very good at a slight depth, although salt water is not 100 yards distant. I could not learn whether anywhere farther inland the same shell-stone is found. But if so, it lies presumably deeper below the surface.

East Florida, as regards sickliness, has often been judged with the same disfavor which experience attaches to the southern parts of North America generally; but without reason. Augustin itself is widely known to be a healthy place, so that weaklings and consumptives from the northern provinces resort hither, and always to their advantage. The garrison troops of the 60th regiment, who were formerly here, gave further confirmation of this in their very small sick-list. The situation of the town, so near the sea, brings it during summer the refreshing sea-winds which prevail between 8 and 9 of the morning, purify the air, and temper the heat. But the same advantage is enjoyed in a measure by the whole province of East Florida, which is only a low point of land between the gulf and the Mexican Bay and hence the passage of the cool morning winds over the entire country, (not over 80 English miles in mean breadth), is unchecked. And notwithstanding the land is pene-

trated by many inlets and creeks, most of these are filled with salt water, of which the exhalations are less harmful. From the experience so far, the winter, on account of sudden and violent north-west winds and consequent catarrhal and inflammatory diseases, is the most sickly season.

From Dr. Yates, the Provincial Secretary, I heard that the year before there died here a man with all the symptoms of hydrophobia, who had been bitten by a mad dog.

Voyage from St. Augustin to the Bahama Islands

At last on the 29th of March the favorable and long awaited moment arrived for leaving the harbor of St. Augustin. In going out, the pilot chose the so-called **Swash,** a channel lying in towards the North Beach. Our vessel drew only 6 ft. of water and yet, in being raised by the seas over the shallowest part of the bank, it received three very jolting shocks, to the great perturbation of our skipper. So soon as we had passed the **Bar,** the pumps were tried and everything examined, but it was found that these rude shakings-up had not damaged the small vessel. With a moderate north-west wind we set our course to the south-east, and the next day (Tuesday the 30th March) found ourselves betimes in the Gulf Stream. Sea-farers know when they get into this mighty ocean-current, partly by the distance gone, that is to say, if they have come 70-80 miles from land, partly by the finer blue color of the sea, which nearer in to the coast grows greener. The Gulf Stream follows a course for the most part directly north-east, and thus stands at varying distances from the curving coast of North America. It is observable by mariners almost as far as the latitude of the Newfoundland Banks; but the more north it flows, the more it broadens and its force diminishes, but it is of strength enough still to delay ships making against the current unless they have favoring winds to overcome its counter-effect. All

ships sailing from Europe to the southern parts of North America must cut through this stream at one place or another. With fresh east winds this is easily managed; however, if the winds are but light, or should there be calms when the ships come into this current, they are by its force imperceptibly to them drawn out of their true course or driven back or at least held within the stream, from which they do not get free so soon as, from the strength of the wind blowing, they judge they should. In this way errors arise frequently in reckoning the course, and ship-masters often find themselves mistaken when from their observations they flatter themselves they are already near the wished-for land. The Gulf Stream, in the middle of the Atlantic ocean and farther north, does not maintain one breadth, direction, and force; for it is evident that the strength of powerful winds and storms, even those at a distance and from opposite directions, must work effects and fortuitous changes in the ocean and in this current as well. In certain circumstances the result is extremely tedious. During the last war it has at times happened that ships bound from New York for southern ports and seeking the high sea in order to avoid hostile privateers, have fallen into the strongest current of the Gulf Stream, and wanting fresh and favorable winds have been drawn away by the current's strength in a direction quite opposite to that intended, and finally have been glad to make the port again from which they sailed.

The origin of the Gulf Stream is to be found chiefly in the east winds continually blowing between the Tropicks, and in the swing of the earth from west to east. These are the two causes, but especially the

first, by which the water of the ocean is incessantly driven among the West Indian islands through to the Mexican Gulf and there heaped up. The water here being opposed on all sides by the main-land, which checks its further course to the west, and that nearest the land being pressed upon heavily and continually by what follows, there remains no outlet by which the Mexican gulf can rid itself of the water ever accumulating in it, except through the narrow channel between the eastern coast of Florida and the northern Bahama islands, a channel in the average not above 30 sea-miles wide. Since through this comparatively narrow channel there must be emptied the great quantity of water always forcing in, the current receives a considerable rapidity and strength which it still shows high up in the western and northern ocean.*

Springing from the same causes there are, among others of the West India and Bahama islands, other water-tows or currents, holding north, but less con-

* The effect of the Gulf Stream extends even to the most northern parts of Europe, seen in foreign substances there washed up. Vid. Hans Sloane, De fructibus Indicis qui solent ad Orcadum littora adpellere. *Phil. Trans.* n. 222.—And Pennant's account of the Molucca beans, so-called, in the Hebrides, or western Islands of Scotland. "These are the seeds of "the *Mimosa scandens, Dolichos urens, Guilandina Bonduc,* "*Bonducella* &c., which grow in plenty on the banks of the "streams of Jamaica, and are carried down in the water to "the sea. By currents and the prevailing East wind they are "brought into the Bay of Florida and thence into the North "American ocean. In the ocean for two thirds of the year "west winds blow, which finally cast these seeds on the "shores of the Hebrides. At times, American turtles are "caught there; and a piece of the mast of the Tilbury ship of

siderable, changeable, and not so well known. These are to be observed especially when by reason of strong east winds, the customary channel cannot expedite all the water. Against the Gulf Stream proper no ship can prevail; hence none can make sail to the south between Florida and the Bahama islands. Only very small craft can creep along, close in-shore where the water is shallow and the force of the mid-current imperceptible or quite absent.

On the high sea, or in the midst of the Atlantic ocean, it is at times difficult to determine whether one is or is not in the Gulf Stream. To settle this, it is usual now and then to throw over-board some light substance; if this, with calm or light north and east winds, is carried nevertheless in a northwest course from the ship, it is taken to be proof, though not absolutely decisive, that the ship is in the current. Recently Dr. Blagden, in the Philosoph. Transact., has shown by thermometrical observations that the tem-

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" war has even been fished up on the Scottish coast, that vessel " having been burned off Jamaica in the last war, and this is " a further proof of the opinion stated above." Pennant's *Voyage to the Hebrides* 1772. Chester, 1774. p. 232, 233. *Vermischte Beyträge zur physikalischen Erdbeschreibung.* Vi, no. 2.—The Gulf Stream should have been particularly mentioned here as the chief means of the long voyage over seas of these West Indian products.—Substances of like sort have been found still farther north, on the coasts of Norway and of northern Asia. Vid. Linnaeus, *Amoen. acad.* Vol. 7, p. 477. The Gulf Stream proper does not indeed extend so far; but where this ceases, other currents and winds act in furtherance. It is however remarkable, and an eloquent proof of the powerful northwestern draught of the Gulf Stream, that no similar products are cast on the North American coasts, notwithstanding the nearness of the West Indies.

perature of the water presents a means, if not wholly positive, of determining this. The water of the Gulf Stream flows fast, and nearly in a direct line, from regions where there has been time enough for the hot air and sun to give it a high degree of warmth, which it in some measure retains throughout the greatest part of its course, even in the winter months, and is thus distinct from the waters of the rest of the ocean, from many causes always less warmed in those parts to the north of the Tropicks. If I remember aright, he found the temperature of the water in the Gulf Stream about 70 degrees Fahr., and that outside some 10 degrees and more less.

It is a remarkable assertion of sea-men, their observation that, if the wind is north-east and thus blowing directly against it, the Gulf Stream flows but the stronger and faster. 'One knot faster,' (i. e. one mile in the hour faster), says our skipper, who knows these parts thoroughly. The reason is likely that by north-east winds the Trade wind between the Tropicks is strengthened also, and consequently a greater amount of water is driven into the Gulf and, with heightened force, out through the channel.

For the rest, the movement of the water in the Gulf Stream, if the wind sets from one or another northern direction, is extremely irksome and difficult, casting vessels pitilessly about. This is even a dangerous circumstance; for it happens not seldom that by the opposite movements of the wind and the current, and the extraordinarily violent 'cross-seas' thus arising, ships are quite turned over, either sinking at once or driving forward 'on the beam-ends.' For this reason, especially in these parts where storms so often come up

suddenly, mariners have a not ungrounded fear of the Gulf Stream, and are always glad when they have passed it.

In the Gulf Stream of this region it is the common tradition that no bottom is to be found with the lead; the causes may be in part the strength of the current, in part also the deeper washing-out of the sea-bottom so occasioned, these explanations being the most probable where the current is most narrowly restricted.

Towards midnight (31st March) the wind veered to the north-west, and pretty soon was blowing hard; we were obliged to close reef the main-sail. The wind having laid, sprang up again from the south-east, directly in our teeth; and remained so until the 3rd of April, during which time we made but little way, notwithstanding that while the wind was favorable we had come a good part of our voyage, covering in one night (before the n. w. mentioned) 115 English miles, by our skipper's reckoning. The contrary wind kept our little ship continually in violent motion. Betweentimes there was calm; the 3rd of April, about seven o'clock in the evening, a dreadful thunder-cloud rose suddenly over us. In the greatest haste our few sails were reefed. The storm passed over rapidly, sparing us its worst fury. Such thunder-squalls are usually very fearful in this region and often dangerous to small vessels. They rage and blow for a quarter or half an hour as if they would lift vessels out of the water, falling so suddenly upon them that the necessary measures of precaution cannot be gone about. After the storm, the wind was quite laid, and then to our gratification blew again from the north-west, so

that we could make sail on our right course 6-8 knots (or as many miles) in the hour.

Sunday, the 4th of April, in the morning at 10 o'clock, there could be discovered from the mast the north-eastern end of the island of Abaco; in the afternoon we drew nearer the island, sailing at some distance from it south-east. Our skipper spent almost the whole afternoon at the mast-head, so as to determine the safest course. For in nearing the Bahama islands, new dangers are met, numerous shallows and sharp rocks surrounding them. It is then well to make the voyage with a Providence captain, thoroughly familiar with the region. Towards evening we were still rounding the eastern point of Abaco, and lay-to under the fore-sail. The wind still kept in the north-west, but the next morning we found to our astonishment that our little vessel had got far off from its position of the day before, and almost against the wind had been driven around the eastern point again. The cause of this was one of those currents setting north-west, which as I have mentioned are here and there to be traced among the West Indian islands, but subject to many changes. When the waters of the Mexican Gulf, besides their usual augmentation due to the winds, are still further swelled by the streams risen from the rains, and the surplus cannot be carried off through the Gulf Stream, it happens then especially that these currents among the islands (and particularly the Bahamas) are observable more than common.

It was long before we could get a second time around the point; the wind was blowing straight towards it, and we had to work hard to come about. A line of rock off Abaco runs straight with the length

of the island; the channel between, perhaps half a mile wide, is navigable for boats.

Abaco is the northernmost of all the Bahama islands, of considerable length but of small breadth. To the north of this island there are various groups, in part small islands uninhabitable for lack of water, partly mere rocks more or less emergent from the water. Rocks of this character are in the West Indies called Keys, and have besides distinguishing names, as Man of War Keys, Guiana Keys &c. They are a terror to sea-men. Abaco until recently had no inhabitants; but now there are settled there many families of North American refugiés, who have made a beginning of two little towns, Carleton and Marsh's Harbour. The island is fertile and it is hoped its new residents will do well there, once they have gone through with the hardships exacted in clearing and preparing wild land. They have given them provisions and other necessaries to supply them at first. The numbers of fish swimming all about them are alone sufficient to feed them, whenever they are ready to engage in the catch.

Towards evening we lost sight of Abaco and after 3 hours came to Egg Island. It is small and uninhabited, surrounded by reefs. Divers water-fowl, but especially the Booby, haunt it in indescribable numbers; their eggs make good food and are industriously fetched thence. Before night we had come within 6 miles of Providence, and the next morning (the 6th of April) passed without mishap the **Bar** which lies at the entrance of the harbor, and cast anchor close in to the town. Here also passage into the harbor is not the most agreeable; a chain of black, rugged, pointed

rocks extending from Hog Island, and over which mad, foaming seas eternally break, admit of no very broad way, which must be followed with circumspection. Shortly after we came in, a large English provision-ship, the David, had the misfortune to run upon the rocks at the entrance, sinking immediately thereafter in the harbor.

During this week of our passage hither from Florida there were now and then a few circumstances to break momentarily the killing tedium of a slow and comfortless voyage.

Every evening young porpoises (*Delphinus Phocaena L.*) swam in tumbling schools about our little vessel. If the sea was still and clear, one could observe them at some depth, and note the rapidity with which they cut the waves. At times there followed us one or more sharks. Grampuses (*Delphinus Orca L.*) likewise might often be seen, but we got sight of no other variety of whale, although divers of them keep in these waters, where ships come from New England even to take them. Turtles now and then, and often floating sea-grass (Gulfweed, *Fucus natans L.*), medusae, and holothuriae were observed. Man of War birds (*Pelecanus Aquilus L.*)—Boatswains (*Lari Spec.*—) Sheerwaters (*Rhynchops nigra L.*) and many other sea-fowl were noticed, either poised on the waves or in flight. The Tropick Bird (*Phaëthon aethereus L.*) appeared at times, but always high in the air. Boobies (*Pelecanus Sula L.*) were met with in great numbers as we drew near the islands, but no land as yet in sight.

Another sort of amusement was furnished us by several among the negroes on board, native Africans.

One of them would often be entertaining his comrades with the music and songs of their country. The instrument which he used for the purpose he called **Gambee**; a notched bar of wood, one end of which he placed against an empty cask, or some other hollow, reverberant body, and the other against his breast. In his right hand he held a small stick of wood, split lengthwise into several clappers (something after the fashion of a harlequin's mace); in his left hand also a small thin wooden stick, unsplit. Beating and rubbing both of these, vigorously and in time, over the notches of the first stick, he produced a hollow rattling noise, accompanied by a song in the Guinea tongue. At the first, his gestures and voice were altogether quiet, soft, and slow; but gradually he raised his voice, and began to grin and make wry faces, ending in such a glowing enthusiasm that his mouth foamed and his eyes rolled wildly about. The Guinea negroes are extremely fond of this rude, barbaric music, and sing or hear their folk-songs sung never without the greatest excitement; and they are at such times capable of any enterprise. Hence in Jamaica, and elsewhere, where there are many Guinea slaves, this sort of music and song is forbidden for the same reason as the *ranz* among the Swiss in service abroad.

Another musical instrument of the true negro is the *Banjah*. Over a hollow calabash (*Cucurb lagenaria L.*) is stretched a sheep-skin, the instrument lengthened with a neck, strung with 4 strings, and made accordant. It gives out a rude sound; usually there is some one besides to give an accompaniment with the drum, or an iron pan, or empty cask, whatever may be at hand. In America and on the islands they make use

of this instrument greatly for the dance. Their melodies are almost always the same, with little variation. The dancers, the musicians, and often even the spectators, sing alternately. Their national dances consist of wonderful leaps and a riotous bending and twisting of the body.

The harbor of Providence is formed and protected by a small island, called Hog Island, lying to the north. There are thus two approaches to the harbor, one to the east, and the other to the west; these are used by ships according to the quarter whence they come or the direction in which they are going.

The capital of the island of Providence, and at the same time of all the other Bahama islands, is the little town of **Nassau**, which hugs the hilly shore. The houses are of wood, all lightly built and of simple construction; according to the needs of the climate here, attention has been given only to roof, shade, space, and air. No chimneys are to be seen, and but few glass-windows. The houses stand apart, surrounded by trees, hedges, and gardens. Most of the houses have besides the frame merely a plain covering of boards; the best are boarded double, but even then the covering is light, and are tastefully decorated within. Any of our light European summer-houses would serve as a comfortable dwelling in Providence at all seasons. There is but one tolerably regular street, or line of houses, which runs next the water. At the eastern end of the town there stands a square Fort, walled, of which at this time a detachment of the 37th Regiment forms the garrison. This covers the entrance to the harbor on this side; as does the small Fort Montagu, two miles from the town, the eastern entrance.

The Governor, at the present time Colonel Maxwell,* occupies a private house leased for him, which has a fine situation on the ridge of a high hill, and hence serves as a landmark to in-coming ships. The Spanish Governor, while he was in possession after the loss of these islands during the last war, had a wall run about this residence, and planted cannon on the garden-terraces leading up to the house; for a Spanish governor seems never to think himself safe, unless begirt with cannon.

A church, a gaol, and an Assembly-house make up the public buildings of the town. Under the splendid name of **Bourse** there is frequented by the waterside a building, quite open, furnished with a roof only, where public sales are held of goods brought in, and all notices and regulations are posted; here may be found throughout the day buyers and sellers, ships' captains, and other persons, of affairs or of none, who come to hear or retail the news. There is no pavement in the town, but none is needed, since the streets, like the whole island, are almost wholly stone.

The inhabitants of the town of Nassau are a few royal officials, divers merchants, shipbuilders and carpenters, skippers, pilots, fishermen, and what laborers are needed, with several families who live on the returns from their lands and the work of their slaves. The real planters, but of lesser consequence, live near to the town on their estates. To the east of the town, along the waterside, are a good number of houses, for the most part occupied by sailors and fishermen; and

* Since October 1787 his Excellency the Earl of Dunmore, (the last British governor of Virginia—), has taken over the government of the Bahama islands.

several English miles farther on is a little village, to which the name New-Guinea has been given, most of its inhabitants being free negroes and mulattoes.

In the town itself, at this time, no quarters were to be had, because all the houses were filled with refugiés escaped from North America, and besides there were many Americans present who had been banished the states of Georgia and South Carolina, as of the royal party, and were expecting here the result of their trials or a permission to return. Half a mile from the town, on the Whiteground so-called, a lodging was found with a carpenter, who himself was a refugié and had rented a house which was quite barn-like; however it was a pleasant situation, by the water. One of the largest and finest of Indian fig-trees (*Ficus benghalensis L.* Trew, *Plant. sel.* Tab. L.) stood close before this dwelling. Not only its distinguished size (for it shaded with its broad-flung branches a circle of 90-100 yards) but also its place in the history of this island makes this tree honorable and famous. Blackbeard, one of the most illustrious of the pirates who during the last century and at the beginning of this had their seat in Providence, was accustomed to distribute his booty under this tree and to pass judgment upon his fellows; after him it is still called *Blackbeard's Tree.* These fig-trees, of which there are a good many on Providence and the other West Indian islands, increase their compass by roots which hang down from the branches of the tree like pleated tresses, and when they touch the ground begin to form a new trunk, conjoined thus with the old. In this way where they are not disturbed they grow prodigiously, and the old trunk of such a tree, with its de-

scendants gathered round it, makes here and there shaded arbors and covered ways of very great extent. Its fruit is small and uncomely and is not enjoyed by either man or beast, nor is its wood of any especial use.

The rock of which the hills of this island and the rest of the Bahamas consists (the same probably as that of other West Indian islands *) is a limestone formed from triturated shells and other hard products of the sea. Such an origin is visible and unmistakable; in the stones themselves fragments of many kinds of shells are plainly enough to be seen; indeed, one even finds in places high above the sea and at a distance from it, whole pieces of what are certainly madrepores, millepores, corals, or other lithophytes which are closely incorporated in the rocky soil, associated with it in such a way that there can be no doubt as to the origin. From these stones lime is burned, but on account of the quartzose sand particles here and there mxied in, this is not always of the same good quality. These stones are excellently suited for building; fresh from the quarry they are so soft that with little difficulty any form can be given them, and afterwards they take on a considerable degree of hardness. They are besides

* The author of the *Voyage d'un Suisse dans different. Colon. de l'Amerique* &c., says of Curaçao: Le sol y est très inegal, maigre, sterile; à peine y trouve-t-on sept à huit pouces de terre. Au dessous est une espéce de roc calcaire, formé par des debris de corps marins petrifiés, au milieu desquels j'ai vu plusieurs madrepores extrémement sains. ✚—And Isert (*Reise nach Guinea und den Caribischen Inseln*) mentions the coast-hills of St. Christopher as made up of petrified madrepores.

valuable in works of defense, burying in themselves what is fired against them, with no splitting.

The outer crust of all these rocks, where they are exposed to the air in high and bare places, or on the shore are washed by the water, is hard and a dirty black in color; but beneath this crust the stone is generally white, soft, fine-grained, and easily friable. This looseness of structure is the occasion of a strange hollowing and mining on the part of the waves playing upon the rocky shore. In this way the shore is given a sharp and jagged look, thousand-pointed and knife-edged, and those unaccustomed pass over it with pains and difficulty, but fishermen and others familiar with these parts, resident here and often engaged on the shore, run about easily, even barefoot, and seem not to give any particular heed to their steps. If one strikes upon these upstanding juts and points, they give out a ringing sound.

The black outer crust and the numerous larger and smaller holes, as if blown, observable among these edges and jutted points, give to the mass an appearance something like scoria, and one might easily go wrong in looking for traces of volcanic fire where the element active has been precisely of the contrary sort, were it not that the inner appearance and character of these rocks give the true indication.

The inhabitants compare these rocks to a honeycomb, and call them 'honey comb'd rocks'; and in a measure the whole island of Providence is made up of such gibbous and hollowed rock. But one must confess that it is nowhere easy to find a fertile rock. The island is throughout covered thick with plants and shrubs, the roots of which find their only nourishment

in the scarce soil among the holes, crevices, and hollows of the rock. Nowhere on the whole island can there be found a spot as much as a rood covered really with earth except where it has been assembled by old or actual swamps, or where low places along the shore have been filled in with mere sand.

At a first view of this soil, everywhere rocky and stony, or of the white and dazzling sand by the shore, all notion of planting would seem to find contradiction, and all hope of a harvest from any plant quite beyond the possible; but with good treatment this rocky soil is by no means unthankful. It would be damaging here to carry too far the clearing of the bush; because rain and wind would then soon destroy the good earth, and the sun burn upon the bald rock; there having been sad experience on the Barbadoes and the Cape Verd islands of indiscreet clearing off of the woods. An acre or piece of arable ground here has indeed a fearful look, for there is to be seen hardly anything but rock, full of larger or smaller pits and holes, containing a pretty strongly reddish earth. Neither trenching nor plowing is therefore to be thought of—such spots may only be broken with a sharp mattock; but whatever is sowed or planted certainly thrives. It is no exaggeration to say that perhaps not the sixth, nor the eighth part of the surface of the island is covered with earth, the rest being naked rock. However, in the wild state every spot is over-grown; the tree and plant roots creep over the rocks and stones, forcing into every cleft and hollow to find a lodging place and nourishment. It is clear that the native shrubs find merely a basis on the rock, and must draw their support chiefly from the air. On the coast there are to be

sure large tracts free of rock; but its place is taken by dry shell-sand in which the heat permits nothing to grow.

This character of the surface makes the working of the land somewhat difficult, and this may be the reason why so many plantations on the island lie deserted and so many houses are in ruins. The situation of this island, and the number of other islands still uninhabited but supplied with various kinds of timber, opened to the settlers other less tedious and more lucrative means of support than those to be had from the monotonous and toilsome life of a planter. However, I will mention here all the products which have been essayed here.

Coffee does excellently; several large orchards full of these trees are to be seen in and about the town; they are growing well, bearing heavily, and the beans are of the best taste. It is therefore a matter of surprize that such plantations are not more general, since the trees once set require little more attention. The sole cause of this neglect is likely that some years must pass before any profit is to be had from a plantation.

The **Sugar-cane** thrives here as well as in other of the Bahamas where it has been tried. Several miles from the town a plantation had been begun, a distillery set up, and rum prepared; but the undertaker dying the work was given over. Of the quality and growth of the cane there can be no doubt, but the rocky nature of the soil makes it impossible to devote sufficiently large tracts to the culture; the work is therefore carried on at too great cost and difficulty, and the sugar cannot be got out at the same rate of outlay as that holding in the other sugar islands near-by. On the

other inhabited Bahama islands the people raise just so much sugar as will supply their household necessities; they do no more than boil the juice of the cane to a thick syrup.

Indigo may be seen here and there growing in gardens, and about them where the seed has fallen by chance and abundantly multiplied. The assertion is made by those who know, that the finest and best indigo is believed to come from the planters here; but large establishments for making it are not set up, on account of the character of the water here, and the lack of the quantity necessary for handling the indigo.

Cotton (*Gossypium arboreum L.*), the culture of this shrub is extending, not so much on Providence as on the other islands; experience having proved that this crop is one of the best and surest rewards of the planter's toil. It grows at all seasons, is not so dependent on rain as other plants, and takes quick and strong hold of the rocky soil.

Yams (*Dioscorea alata L.*) are raised everywhere in plenty, partly for family use, and also (but in no great bulk) for export to North America. The cut tubercles are once a year set in the ground and increase extraordinarily.

Maize yields but one harvest a year, the character of the seasons not admitting of two plantings. It cannot be put into the ground until the rainy season has begun, in June or July that is, and thus does not mature until November or December. So its growth is no faster here than on the American continent where the planting is in May and the harvest in September. The dryness of the other months does not permit of a second seeding. This is the only grain

produced on this island, and the quantity raised is by no means sufficient. America sends many cargoes hither, to supply the lack.

The **Tamarind** (*Tamarindus indica L.*) has not become indigenous here, but is planted now and then. The trees are of a large and fine growth, with stout trunks and wide-spreading branches. The leaves of this tree, as is well known, fold up at night. The fruit is borne in quantity, pods 4-5 inches long, of a hard but brittle shell, brown in color. Within, between tough, woody fibres, lies the very sour marrow which surrounds the seed. The shells are husked, and the inner parts set in earthern pots, between layers of brown sugar, and thus expedited.

As yet, very little of consequence has been done in wine-making; but it is said that the wild-grapes growing here are very like the grapes of Madeira, and that some good wine has been expressed from them already.

Orange and lemon trees were at first transplanted by Europeans but are now become quite native; almost all the known species and varieties are to be met with here. The best crop of oranges is gathered about Christmas; the August crop does not yield such agreeable fruit. The sweet oranges bear properly but once a year; but the commoner sour oranges, and the bitter-sweet, yield ripe fruit mostly throughout the year, however it is plucked in the greatest quantity at the time mentioned. More rare are the 'soursoops,' (*Pumpelmus, Citrus decumana L.**) The sort produced most abundantly, and less known in Europe, is *Limes,* which

* Citrus fructu sphærico-octavo punctato lævi minori acido. Brown, *Nat. hist of Jamaica* p. 308, n. 1. Malus aurantia fructu limonis pusillo acidissimo. Sloane, *Voyage,* II, p. 182.

are in general not much bigger than a dove's egg, round, smooth, pale in color, with no smell, but of a very sour taste. These limes are exported in great quantity, from this and the other West Indian islands, to all of North America, where they are preferred greatly for punch, being juicier and sourer than lemons. Also, the expressed juice is sent off in casks. The trees bearing this fruit are but low and bushy and commonly bend beneath the weight. Little or no attention is given them, and in places where orchards have been set, there is to be seen now little but a wilderness of bush.

Ananas or Pine-apples. There are several varieties. That more generally raised here seems to be the *Ananas aculentus fructu pyramidato, carne aurea T.* Many acres of land are every year set with this excellent fruit; and many cargoes exported to all parts of America and even to Europe. They are cut for export when full matured but still green exteriorly. They first begin to ripen early in May, but very little is gathered for shipping before the end of May or the beginning of June. If well and drily packed on board ship, and so kept, they stand a voyage of four to six weeks and more. The ship by which I returned to England in June, had several thousand on board, and brought them well-preserved to London, where according to the size and beauty of the fruit the selling price was 4-6-8 shillings sterling the piece. The purchase price was 4-5 shillings sterling a dozen. They are also conserved in sugar or brandy. Even the peelings of this fruit give to rum a very pleasant taste.

But as early as the beginning of May a schooner was clearing for America with a cargo of pine-apples and

limes; at that time none of the earliest fruit was to be seen in the town; but this vessel had collected a cargo on the outlying islands, of the ripest fruit, or that nearest ripe, so as to be the first off to America. In exchange they take from North America and from Europe fresh and salted meats, butter, rice, corn, wheat &c., utensils and clothing of every description.

From these several products and the work of the negroes those who own plantations draw considerable returns. The statement is made that only from pine-apples, yams, lemons, and coffee, a plantation (large to be sure) has yielded a profit in one year of 2300 pieces of eight.

In a few gardens about the town divers European vegetables are raised; but this can only be during the rain months; during the rest of the year nothing of the sort does well, owing to the great heat and the dryness. But they have water-melons and some other fruits almost throughout the year. The soil and the weather being what they are, gardeners and planters do not find here sufficient occupation or support; therefore they must look about for other ways to make a living, and of these the most important are: the felling of all kinds of wood; fishing; the catching of turtles; and what is called **wracking,** seeking out and raising those ships and cargoes which have had the ill luck to founder or sink in the Bahama straights or among the other islands.

Almost all the Bahama islands, such as are not mere barren ledges or keys so-called, are thickly overgrown with bush. Although most of the trees of these islands are low and mean looking, there are found nevertheless on some of the larger islands strong, high trunks.

Every man can fell wood as it pleases him and wherever he finds it; and this is a considerable source of gain to most of the families here resident, who keep their negroes constantly employed in this way, and send them hither and yon on the business. One is puzzled to see most of the white inhabitants of Providence living well and yet going about in idleness; but they live by the sweat of their slaves. Wood-cutting is gradually becoming more difficult and less lucrative. On the islands lying next Providence the best wood is already cut off, and thus there must be recourse to islands lying farther away, or the woods must be more deeply gone into; in either case the expedition of the wood felled is made more burdensome. Besides, those who have wood cut in this way, unless they own their vessels and boats, must lose in getting the wood to Providence for marketing; for the charge for freight is, according to circumstances, ⅓-½ of the wood.

Mahogany is what they look for and cut oftenest. But the Bahama islands yield no such large, thick trunks as do others of the West Indies, especially Cuba, whence boards of good length and breadth are fetched. The logs taken from Providence are better adapted for pillars, frames, and other less important work. The mahogany wood which is sent to Europe from this and the other West India islands does by no means come from one and the same variety of tree. Besides the *Swietenia Mahogany L.** Several kinds of Mimosa and perhaps other related trees are marketed under this name. Thus it happens that so many different sorts of mahogany wood are found in mer-

* Catesb., *Carol.* II, p. 81. t. 81.

chants' warehouses and in artists' work-rooms. An uncommon sort is called here, from its color and coarse wood-fibre, the 'Horse-flesh Mahogany.' Another kind, paler in color, is the so-called Madeira wood, but this also passes in Europe for mahogany. This is more easily workable, and comes from the *Cedrela odorata L.* In the woods near the town we were shown several species of trees, under the name of mahogany, but none of them was the Swietenia, which, it seems, is hardly to be found any longer in the neighborhood. In the West Indies much mahogany is used in ship-building. At the time, a **brigg** was lying here on the stocks, of which the lower part was made entirely of mahogany. Mahogany lasts longer in the water than any other wood, and it is not readily attacked by worms; but from its heavier weight it may be used only for the lower part of ships, the upper part having to be of a lighter timber. Mahogany logs sink of themselves in salt water.

The next species of wood which is cut and exported in considerable quantity is **Brasiletto** (*Caesalpina brasiliensis L.**). Its trunks are small, unsightly, and for the most part crooked. This wood does not grow at all in Carolina, appearing first in the West Indies; it may possibly be found on the point of Florida as well. Catesby has been responsible for the error, in his work which he calls *History of Carolina* where so many subjects are included belonging to the Bahama Islands, but not always referred to their place of origin, and he has thus given occasion for regarding divers trees and plants as products of Carolina, when

* Pseudo Santalum croceum. Catesb., *Carol.* II, t. 51.

they are not. This wood, as is known, is used for dyeing.

Lignum Vitæ: under this name there is exported at times *Guaiacum officinale,* at times *Guaiacum sanctum L.,* however, the last is greatly rarer than the first. The trees are not very high and no thicker than a man's arm or leg. Most of this wood sent from here is, from its especial hardness, used in mechanical apparatus. A great traffic in it is particularly furthered by its use on ships, where the pulleys and blocks for the rigging are made solely of this wood. Now and then gum is gathered from the trunks. The medicinal use of guaiaca wood ✝ is well known; but in addition the inner bark is employed here as an emetick. Some of it is bruised or beaten in a mortar, cold water is poured on, and the decoction let stand over-night. It has a strong effect, and is a customary household remedy in these parts. The shrub in bloom is of much beauty.

Logwood or Campeachy-wood *(Haematoxylon Campechianum L.)* is not originally indigenous here. But formerly many of the inhabitants going into Honduras Bay to cut this wood there, they brought seeds back with them and planted them here. This was done with good result here and there, and it is considered how so useful an article of trade may be further spread. The export has not yet become an important item.

White Cinnamon, Eluthera-bark, (wild cinnamon) is produced by the *Winterania Canella L.* Catesb. II, t. 50, which grows in abundance on several islands, but especially on Eluthera; besides the quantity that goes to Europe, many tons of this are sent to Curaçao and

other Dutch colonies, where cinnamon-water, perhaps also cinnamon-oil, is distilled from it.

Cascarilla Bark, *Croton Cascarilla L.* Catesb. II, t. 46, is likewise gathered on sundry of the islands.

Under the name of Squills (also Sea-onions) a large onion similar to the squilla is collected on the sandy shore, dried, and sent to North America. The appearance of these is the same, and it is said their virtues are quite the same as those possessed by the ordinary *Scilla maritima.* At this time the plant was not in flower, and I could not determine whether it is a species of the *Scilla,* or (more likely) a *Pancratium.*

Fishing is a common employment of the poorer white inhabitants as well as of many negroes; however, fish are not always to be had when wanted. After a profitable or heavy catch, the fishermen dispose themselves to drinking up their gains rather than to taking thought of their own needs or those of the market. There is no regular fish-market, but the fishermen send what they catch from house to house, or one must go to them. There is a great variety of fish. The finest and most remarkable have been well described and pictured by Catesby. The high, splendid, contrasting colors with which most of the fishes of these and the other West Indian waters are adorned, are certainly very striking. The most glowing red, the purest blue, green, and yellow are as common among them as such high colors are rare among European fishes. Before coming hither I was disposed to think that Catesby, in the representations of his fishes, had done violence to nature; but I became convinced of the contrary, and of the truth of his colorings; the feathered inhabitants of the South American forests are scarcely more

decorate with motly and pure colors than are these dumb ocean-dwellers.

To give a list of the fishes occurring in the Bahama waters would be merely to repeat the names of those found in the other West Indian waters and in part also (at least during summer) on the coast of the continent. Of edible fishes there are a great number, but opportunity was lacking to see them all. Among others there were mentioned the Rock fish, Cuckold fish, Jew fish, Albecore, Rainbow, Sailor's Choice, Schoolmaster, Blue fish, Mullets, Stingers, Squirrels, Ten Pounders, Trumpet fish, and many others, good edible fish. A few others appeared at our table; the Maggot fish (*Sparus Chrysops L.*) Pudding fish (*Sparus radiatus L.*);—a blue Tetrodon;—the Murcäna; (*Perca chrysoptera L.*)—the Suet fish (*Ostracion triqueter L.*). Oldwife (*Balistes Vetula L.*)—the Turbot (*Balistes Monoceros L.*) &c.

The most are of good taste; but of some there are unfavorable opinions, they being held to be noxious; the Barracuda-fish, for example, which in Cuba is reckoned among the best of fishes, is here regarded with suspicion, thought to be not only unwholesome but even poisonous. The belief already mentioned, that fishes which frequent (imagined) copper-banks show poisonous qualities, is prevalent here also. The observation is just, but the cause yet to be assigned. Certain fishes at divers times excite in those eating them pricking pains in the skin and transient eruptions. In order to avoid these fishes, it is advised here to drop a piece of pure silver in the water in which the fish is boiled, and this, if the fish is poisonous,

should turn black. The proof may well be very unreliable.

I removed the tough skin from a turbot and hung it up to dry; passing that way by chance at night I was no little astonished at the fiery outline of my fish. All the cartilaginous parts of the body and the spine, the rays of the tail and fins gave forth a beautiful, clear, phosphoric light. That phosphorus may be had from rotten fish is well known and the luminosity of sea-water has been thus explained. But as yet this skin gave no signs of decay, and it was precisely the firmest parts which were luminous, those that would likely be the last to rot.

Nor is there any lack here of dangerous and noxious predatory fishes; the shark is the terror of the Bahama divers and swimmers. The West Indian waters, in which such an unspeakable number of fishes live, support these voracious monsters in great plenty. Not less astounding than true are the stories told of what happened during the last war. They say that three days before the battle between Lord Rodney and the Comte de Grasse, whole schools of sharks followed both fleets, and that the sea was so full of them and they crowded so among the islands, that no one dared bathe the least distance from shore. It is probable that the number of corpses from time to time cast overboard from two such large fleets was what tempted these fishes of prey; for in that climate many men died even before the battle, stricken by disease. But in the battle itself this gruesome assemblage increased the terror and made worse the fate of the French ship of the line Caesar. When this ship was near sinking and the crew hoping to save themselves or to be saved,

leaped into the sea, many of those ill-fated men were devoured by the lurking and rapacious sharks, and it is said often to have happened that one man was attacked at the same time by two fish. All efforts to rescue these desperate men were in vain, whose cries of distress were heard with horror and pity amid the incessant cannonading of the fleets.

The various whales, ice-whales, ' nursers ' &c, which frequent the region of the islands, are rarely or never pursued by the inhabitants here; but the New Englanders (the true American Dutchmen, balking at nothing) come hither for the whaling, even as they go to the African coast and as far as the Falkland Islands, and, were other nations to allow them, they would follow the whale into East Indian waters.

The **Turtle-catch** is a more lucrative pursuit, and for these Islanders is an important branch of trade. Three varieties of turtles are hunted, whether for their flesh or their shells:

Testudo imbricata—Hawksbill. Testudo Myda—Green Turtle. Testudo Caretta—Loggerhead.

The turtle-shells used by artists come solely from the first kind. After the fleshy parts have been taken out, the whole shell is placed over a slow fire of coals; the heat separates the upper transparent sheets from the bony armor.

The flesh of all three sorts is eaten here, as throughout the West Indies, without distinction. But for foreign markets chiefly none but the green turtles are selected, and these during the summer months are exported to all parts of North America and Europe.

All these turtles are found properly nowhere but in the warmer waters of the Atlantic ocean; but storms,

the Gulf Stream, and other causes take individuals of them at times far up into northern regions. The turtles found among the Bahama islands and on the coast of Florida are seldom so large as those met with about Cuba, on the South American coasts, in the Gulf of Mexico, in Campeachy and Honduras Bay, and about the point of **Catoche.** Being more numerous in these parts, the vessels engaged in the traffick commonly seek them there; they must however be on the watch so as not to be taken unawares by the Spanish Guarda-costas, who deal rigorously with all strange vessels approaching their shores. The Spanish themselves make little account of the turtle, their chief concern being with smuggling, which the turtle-catchers generally carry on as a part of their business. The turtles are caught in several ways. They are snooked especially in the months of May, June, and July when they come a-shore in the evening to lay their eggs in the sand. With this in view towards evening several persons are put on shore where they merely go up and down turning on their backs such turtles as they happen upon. From this position they cannot get upon their bellies again, and they are so collected and taken on board. When a place is found where they have laid their eggs and buried them in the sand, the eggs are taken along also, serving as food to the ship's people. Commonly a great number of the eggs are found together; enclosed merely in a soft skinny shell, containing little white.

Elsewhere at the mouths of creeks and narrow inlets, which the turtles are accustomed to frequent, nets are laid, very spacious and knit of very weak threads.

However, even the largest turtles once involved, by the head or only one of their feet, make no effort to break loose, but stay quietly meshed until they are fetched away.

At other times they are hunted in little open boats, and caught by means of a very simple kedge-iron. An iron punch 4-5 inches long, with a cord attached, is fixed to the end of a wooden staff; with this, when they swim to the surface of the water the turtles are grappled with a peculiar fling, at a good distance even. The iron punch sticks fast in the pliable shell, and the turtle without any resistance is drawn in by the cord.

When one of these vessels has as many turtles as it can lade, it returns with the cargo to Providence. Here they are kept in special 'Turtle-Crawls,' built of piles of a kind of laurel called stopper-wood (*Laurus Borbonia L.*), and so placed near the wharves that they can always be supplied with fresh water. The so-called stopperwood is used for this purpose because it is strong and lasts well under water. The turtles to be sent on short voyages are placed on their backs in the ship's hold, and given a bed of reeds or anything to keep them from doing each other damage when the ship moves. Arrived in port, they are at once put into great casks and diligently supplied with fresh sea water. On longer voyages, to Europe for example, they must be kept in large hogsheads and new water from the sea must be daily given them. Commonly they eat nothing, at least very little, during their captivity; hence they are always brought to port much wasted; and many of them perish on the way, particularly during heavy weather. However, the shipmasters who take them out always carry store of a

plant which grows on the rocky shores of this island, and is said to serve as food for the turtles. This plant is called here *Samphire* (*Batis maritima L.?*). Turtles are found of an amazing size; I have seen some of 800 pounds and more. On Providence they form a substitute for fresh butcher's meat, which is everywhere a great rarity here. Some of them are killed every day, and sold by the pound weight at a very moderate price.

Hunting out wrecked ships is finally one of the most important trades of the Bahama islanders. Navigation through the Gulf as well as among the islands is very intricate and perilous on account of the numerous hidden ledges and strong currents, and all manner of vessels are continually meeting with disaster in this region. Is a ship by any chance brought among the Bahama islands and rocks, it is only by great good fortune and skill that it can be got out again; one unfamiliar with the region need not flatter himself that he can compass it. The vessels engaged in this so-called 'wracking'* are but small; they remain out many weeks, and examine every quarter where they may hope to find lost ships, especially if shortly before heavy storms have raged thereabouts. Each vessel going out on such an enterprize must be furnished with a pass from the Governor, in which he reserves for himself and the king the customary **fifth** and **tenth** part of the find. A part of the salary of the Governor comes from these duties; but they are seldom rightly settled, because the undertakers pay in the fixed pro-

* Some call it 'going a raking' from 'to rake,' searching for something with diligence and care; others, 'going a wracking,' from 'wrack,' a foundered ship.

portion on only so much as they please to reckon the whole. In the pass the ship's people are warned: should they find a stranded ship, to prevent no one from rendering the unfortunates every timely assistance; for the Bahama islanders are suspected, it is said, of making bargains with the crews of lost ships, in the matter of the salvage of ship and cargo, so that often from selfish motives all other assistance has been repelled.

When a wrecker (I may be permitted for brevity to use the expression) lights upon a foundered ship, and but a single member of the crew is on board alive, the owners are by that fact assured their right to the cargo or what can be saved of it; the Bahama ship's people rendering aid receive for their trouble, according to the circumstances, a greater or lesser part of what is saved, or an indemnity called salvage. But if they find the ship wholly deserted or the crew all dead, everything that can be saved or is saved belongs to the finders. These hard and fast conditions, it is said, often tempt those of inhuman dispositions (and such people may well be of that character, living as they do by the misfortunes of others), so that without much scruple they put to death any persons found alone and helpless on a stranded ship of great value, in order that they themselves may have the right to lay claim to the entire **wreck.** Such cases may indeed have happened; but it would be difficult to fix upon recent instances; and on the other hand it cannot be denied that these **wreckers** swimming about save the lives of many people who but for them would inevitably be lost. How often have they not found many upon naked, solitary rocks, men who having escaped one mortal danger, for lack of food and drink now were

brought face to face with a far slower and more tormenting death. These islanders everywhere find the means of the meagerest living where nobody else could find anything at all; at least they know how to discover crabs and edible shell-fish on the barest rocks, and to find sweet water here or there, so as to preserve the lives of such unfortunates until further help can be supplied them. On the sea-shore, at all events, there are generally to be found some means of support. On most of these islands, especially the smaller of them, it would be useless to look for fresh water. But the inhabitants, if there is need, can supply the lack. They dig, if only with their hands, in the sand on the shore, and in this way get water somewhat strained of the salt. Besides, they have recourse to the trees. A parasitical plant (*Tillandsia polystachya L.*), called here 'wild-pine,' grows on the branches and trunks of divers trees. In the hollows between the leaves of this plant rain-water is long kept; and from this source travellers, or negroes working in the woods, often refresh themselves. They have learned it of the birds, accustomed from of old to resort to these super-terrene springs.

Many times the finds made by these people are very handsome, and it is known that divers families have in this way come suddenly into great riches. Just now it is related in Providence how such a boat got 60,000 piastres from a sunken Spanish vessel. This is generally believed to be the fact, although the finders deny it so as not to be obliged to pay in the **fifth** and the **tenth.**

They always have on board the most practiced divers, who fetch up much costly merchandise and

many a jewel. It is the Bahama islands, next after the Bermudas, which are the most famous in America as furnishing the best and most skilful divers. When they sail about among the islands to look out sunken wares, in order to see more clearly through the water they make use of a square box at the bottom of which is set a common pane of glass. This device serves merely to prevent the rays of light coming from the side, enabling the eye to catch more readily those springing from the deep. I make scruple to mention the depths to which it is said that some of these people can see, because the claim appears to me improbable, and I have not been present at any test of the kind.

In the wars carried on by England with Spain and France the Bahamans have commonly been much advantaged, finding their greatest gains. They fit out many large and small privateers, and through their exact knowledge of the West Indian waters with all their nooks and corners, have made great profits in playing hide and seek with the enemy's ships, surprising them, and taking them in. Then there are many ship-wrecks besides, and the crews of such vessels, less concerned for their cargoes than for their own liberty, often leave behind them much wealth which they could easily save in times of peace, and all this in consequence falls into the hands of the industrious Bahamans.

The extraordinary clearness of the sea-water which is observable everywhere about these and the other West India islands, if there is no discoloration by land-streams and the depth itself is not great, offers very much in furtherance of this species of search. By going out in a small boat among the little islands

the rarest and most splendid sight is to be had. The boat swims on a substance of crystalline fluidity in which, as in the air, it seems to hang. Those unaccustomed are like to grow giddy at the sight. Below, on the pure white sand covering the bottom, one can make out every detail, reptilia of a thousand forms, sea-urchins and sea-stars, slugs, shell-fish and particolored fishes; one floats above whole forests of stately sea-plants, gorgoniae, corals, alcyoniae, flabellae, and many sorts of shrubby spongious growths, their colors not less delighting the eye, and as softly moved by the waves back and forth as a flower-strewn field of the earth. The eye is deceived in judging the depth at which these objects are visible. Thinking to grasp plants with the hand, it appears that they are hardly to be reached by a rudder 6-8 and 10 ft. long.

Only among the islands lying more closely together, and near about the larger islands, are these submarine gardens to be found, at least they are only perceptible to the eye where the bottom is no deeper than can be reached by the rays of light; which is the case up to 60 ft. and more. If these island groups are imagined as individual mountains set in the bosom of the ocean, then the shallow passages between the emergent peaks are to be regarded as so many valleys overflowd by the sea. For the conditions in general are quite otherwise. Near in to Providence Island, outside the harbor (and it is the same between the other larger islands) no bottom is commonly to be had, a very slight distance from the shore, at 100 fathoms and over, and the sea above these depths has, a good way off, a sinister and black appearance. The Bahama islands are therefore rightly to be regarded as high

and steep points of rock emerging from the depths of the sea. If, besides, the character of these rock-masses is taken into consideration, broken as they are by numerous holes and hollows (at least such is the appearance above the surface) there might seem to be ground for the fear that the foundations of these islands may be easily moved, and a subterranean convulsion may bring about a dreadful destruction among them. Happily, these islands seem to be safe from such a calamity; at any rate not the least trace of an earthquake has as yet been felt here; even when, in the other West India islands near-by or on the main-land, earth-quakes have wrought extreme havoc. It is even probable that the mineral material, necessary for the production of subterranean fires or of expansive gases, is lacking in the interior of these rocky islands; at the least, not the smallest trace of any ore-bearing substance has thus far been found.

The fear that these islands might at some time suddenly disappear, seems to me therefore to be as little grounded as the remark that they are everywhere exposed to a destructive force, are palpably diminishing, and that no least sign of a cognizable augmentation of them is to be anywhere made out. For it is known well enough that the western points of all the West Indian islands are exactly the opposites of the eastern. The latter, it is true, are steep and broken, undeniably of a distorted look, since exposed to the incessant beat of the ocean from the east; whereas the former, the sea being quieter there, are flatter and, according to the observations of ships' captains, rather increase than diminish.

Providence Island has many caves and clefts, larger

and smaller. Most of these are by the sea or near it, and doubtless owe their origin to the water. I have heard of a very large cave at the western end of the island, 10-12 miles from the town, of such a size that a chaise may be driven into it. Here and there among the hills in the middle of the island are many large, deep holes 6-10 ft. and more across, and as much as 20-30 in depth. They contain no traces whatever of volcanoes, as certain of the inhabitants have believed, strata of the common rock being plainly observable in them. In these caves dwelt the aboriginal Indians, where often now Indian utensils and antiquities are to be found. They are filling up gradually with plant-earth, and at times trees grow in them, which although high, barely show above the surface. Proof elsewhere of the hollowed state of this and other of the islands is furnished by the ponds and plashes found at a distance from the sea and yet filled with salt water. These, although quite surrounded by hills, and having no visible land-connection with the sea, rise and fall with the flood and ebb tides.

From the same cause there is observed a periodical rise and fall of the water in the wells of the town dug near the shore through the soft rock. That is to say, the water in these shallow wells never stands higher than the water in the harbor—the farther off from the sea, the better. One can count on finding sweet water everywhere, even on the higher hills, if digging is carried down to the level of the sea-water, which is well purified by the species of rock found here. At times filters are made of these stones for the use of sea-farers. These dug wells never go dry—and the water of them keeps excellently on voyages.

The faculty of the rocks of these islands for absorbing and holding moisture, makes it likely that in this way they contribute to the nourishment and preservation of the plants growing upon them. There is abundant proof that under their dry and blackish crust these rocks show markedly moist when broken, and that too in places where there is no water near; but this is more plainly the case after a series of rainy days. Fragments of rock, quite dry in appearance, on being broken give out a faint odor of sulphur.

Of wild quadrupeds there are but two species, properly only one, indigenous to these islands. The **Racoon** is found only on Providence Island, of which it is no more originally a native than the rats and mice brought in by ships. From one or more tame pairs of these droll beasts, brought over by the curious from the main-land, and afterwards escaped by chance into the woods, the race has amazingly increased, to the great vexation and damage of the inhabitants, who can scarcely protect their house-fowls from these stealthy thieves.

On the other hand, the **American marmot** (*Arctomys Monax Schreb.*) has been found from the first on the larger of the Bahama islands. They call it **Rabbet** here, a coney, but in North America the woodjack. It lives in holes in the cliffs, and hardly grows to the size of a coney, at least those I saw on Providence were much smaller. Whoever has occasion to compare these carefully with the North American will find the two something different, in color as well as in size. They are eaten both fresh, and salted and dried; the negroes practice the latter method, when they catch some of them on outlying islands and wish to save

them for the market. They can be tamed, and kept on all kinds of roots, and bread and sugar. Of their manner of life in the wild state I could learn nothing precise; nor whether in this region as in North America they spend a part of the year asleep. I should hardly expect this in this climate, where there is never any lack of food and there is no compulsion from severe weather.

Cattle-breeding here is restricted merely to cows and goats, kept for their milk, and a few sheep and swine. Want of proper pasturage, and lack of water also, (although there are dug wells and there might be more) stand in the way of the cattle industry, a matter of little concern, since slaughtered cattle are often brought in from North America. From the competition brought about by the sailors during the war, goats are sold here at 20, 30, to 40 piastres. Of the hogs raised here some have run off into the woods and multiply there; these animals also, by chance or by means of wrecked ships, have reached several of the islands as yet unsettled, and lapsing into the wild there, are become distinct from the tame sort, both in the color of their flesh and its taste.

Besides numbers of domestic house-fowls of all sorts, there are several kinds of wild fowl which serve in part for food; wild geese and ducks, among others the Bahama Duck (*Anas bahamensis L.*), the North American Blue wing'd Tail and the whistling Duck. The Booby (*Pelecanus Sula L.*), was it of a little better taste would not be found so numerously. These frequent some of the smaller islands in flocks of hundreds, and build their nests close together of sand and dried sea-plants. Their eggs are eaten, and are dili-

gently searched out by fishermen, but there is no trouble involved, because these birds are so stupid that they let themselves be handled on the nest and robbed of their eggs. They lay throughout the year, except in the month of May, only one egg, and as often as this is removed they lay another. The Noddys (*Sterna stolida L.*) commonly keep them company. The splendid Flamingos (*Phoenicopterus ruber L.*) promenade in series, with measured steps, on the sandy shores of Abaco and other little frequented islands. They are said to be good to eat, but the Spanish are superstitious about eating them, and for the reverential reason that the flying flamingo, with its long outstretched neck and feet and its two wings, presents the form of a crucifix floating in the air. The often mentioned fact that the flamingo takes its food from behind, bending and twisting its neck, is without substantiation.

In the woods on Providence there are two kinds of wild pigeons (*Columba montana and leucocephala L.*) but they are continually being snared. Their favorite food is a small, rather bitter fruit called the ' Pidgeon-plumb.' Besides these I saw the *Fringilla montana* and *Ardea violacea L.* The American mocking-bird, and another sort of thrushes, green parrots and humming-birds, were met with also, but in general there are few land-birds on these islands.

Food-supplies are to be had with less difficulty and in greater quantity from the different classes of amphibia, fishes, insects, and reptiles. It seems that the inhabitants of these islands have left no living thing in peace. The turtles, which in general must take the place of fresh meats, I have already described.

Then there are the Guanas (*Lacerta Iguana L.*) a large sort of lizards, a very special tidbit. They are found 1-2-3 ft. long, and weighing 10-12-15 pounds. Their color is a dirty brown, the young being generally paler. The dented comb under the throat (*gula pendula, antice dentata*) I have not observed here; and I am almost of the opinion that on a closer examination the Bahama guanas may be found to be a variety, as compared with those seen in the other West Indies and in South America, showing however the same characteristics and mode of life. The greatest number of them at this time are found on Andros and several other islands; they are already become scarce on Providence. The negroes employ themselves in catching them and sell them for 1-1½-2 bits the pound. They use for the purpose dogs specially trained. The guana comes out of its holes to warm itself in the sun, on rocks and by the shore; and there the dogs look for them. They get away with great speed, attempting to hide in hollow trees or holes in the rock. The dog follows them and stands yelping until his master comes up and prepares to dig them out or pull them forth by the tail. It is said that in these circumstances they can puff up their whole skin, which hangs loose at best, so as to fix themselves the faster in their holes and resist being pulled out. Certain it is that when a guana is vexed the skin under the throat swells sharply. But besides, they can cling anywhere with their short, strong feet and claws. When the negro has the beast out of its hole, with a crooked stick he bears down on its jaws, which are armed with numerous sharp, pointed teeth, and immediately sews together the jaws with a strong needle and thread,

stitching several times through the nostrils and beneath the under jaw, and he also ties fast the fore and hind feet. Their teeth, to be sure, are not large, but are very sharp; at times they bite a man's hand, and when they do, they hold so fast that skin and flesh come away together. Bound like this they live many weeks without food. They are very tenacious of life, as are many animals of this class. A guana which I wished to stuff still showed signs of consciousness, after all its vitals had been taken out and it had been quite bled. They climb up the highest trees, and make their food preferably of fruits; they are said to like especially the fruit of the sapadilla tree; they are also good swimmers. Their flesh is not distasteful and very white; it is similar to the meat of fish, and of chickens.

The Lobster or Hummer of these parts (*Cancer Homarus L.*) is at the first glance distinguishable from the North American lobster, by its very long horns, heavy and hard, which it carries instead of pincers, and in addition, by its color. It grows almost as large as the North American, and its flesh is white and hard, but very pleasant. They prefer rocky bottoms, and in the very clear water they can be seen crawling about at a considerable depth; their course is forwards. They are taken by means of a long stick pointed with iron at the end, with which they are stuck under water. By certain of the inhabitants the land-crabs also, the blue crabs, the so-called 'soldiers,' and other kinds of crabs as well, are eaten. The land-crab (*Cancer ruricola L.*) seemed to me a very repulsive mess. They stay in deep holes which they dig in the sand and the bush near the shore—often some hundreds of yards

from the water. During the day they keep hidden, but in the evening they leave their holes and go out after food. Their bodies are commonly 3-4 inches in the square. It is puzzling how they dig their deep holes; their claws do not seem constructed for the work. Where they come beneath a garden or other planted land, they do great damage, eating off the roots of the plants. One of their claws, at times the right, again the left, is always larger than the other; and these they keep before them in a threatening and defensive position; what they seize with them they do not readily let go; but they do not hesitate to part with their claws if held fast by them.

The **Soldiers** (*Cancer Diogenes L.*) are small slender crabs, which live in remains of cockle-shells, and they drag this dwelling of theirs everywhere about with them. When they outgrow their dwelling they look for another larger. On this account they keep near the sea-shore, although they are found living farther off, among holes in the rock and beneath heaps of stones. Another sort of small crabs, quite distinct from these, lives also in cockle-shells, but stays in the water. Of both kinds the hinder-part, or tail, is covered with no hard shell, but is soft and flexible, so that they may adapt themselves the better to the turns of the cockle, getting a grip upon it and drawing it after them. That one of their claws which is the longer lies out before the entrance to their house, ready for defence.

The Fidlers and Land-turtles (*Cancer vocans L.*) are further varieties of very small crabs, which live in the shore-sand. There are in general many different

sorts of cray-fish and crabs in these waters, and a good many of them are used for food.

Also a few varieties of Echini ('Sea-eggs'), several sorts of larger cockles, ('Conchs' and 'Welks,' *Strombus Gigas* and *Turbo margaritaceus L.*), are eaten by the less fastidious of the inhabitants; a variety of the lepas (*Chiton squamosus L.?*), which everywhere clings fast to the rocks by the sea, is pricked from the shell by the fishermen and negroes, and eaten raw like oysters.

The chief foods then of the greater, and poorer, part of these islanders are fish, amphibia, and crustacea, materials in consequence of a slimy, tough nature. In addition they consume much salted meat, brought in from Europe and America. The practicioners here attribute the commonest diseases, arising from stoppages of the bowels and cacochymy, to the foods in use. There is mentioned in various English medical authors an *Arthritis bahamensis;* but during my stay I could not learn of any special kind of gout * peculiar to these islanders, or appearing here oftener than elsewhere. On the other hand it has been remarked that during the past 7-8 years bilious diseases have been more frequent and worse than formerly, notwithstanding the manner of life has been the same, except that during the American war the importation of fresh foods, meats and fowls, had to be foregone.

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* At least, no one on the islands could give me any light as to this. But the explanation is to be found in the London *Philos. Transact.* for 1675, where there is an account of poisonous fishes met with in the Bahama waters, which if eaten *cause extremely violent pains, especially in the joints,* persisting several days and finally passing off with an itch.

In the Bahama islands the reckoning is by **pieces of eight,** which is an imaginary coinage worth eight bits so-called. The bits are in part an old round Spanish coin, in part, small irregular pieces of silver, cornered, and stamped with a cross. A Spanish dollar is worth 10½ such bits, or 4 sh. 8d. sterling—or 7 sh. 10½ pence Bahama money. These Spanish or Mexican dollars are the Pezzi d'otto of the Spaniards. The 'bits' circulating in the Bahama islands are not worth generally their value current. But a great quantity of them being in the hands of the people, no attempt has so far been made to establish a different basis, everybody having much to lose. It is estimated that in these islands there are current, of these double, single, and half-bit pieces, some 2500 pounds' weight.

The prices at this time of wares most commonly exported hence were as follows:

Cascarilla bark—100 Pd.—3 p. of eight, or 10 sh. 6d. sterl.

Canella alba—100 Pd.—3 p. of eight, or 10 sh. 6d. sterl.

Gummi Guaiacum—100 Pd.—5 Pd. sterl.

Dried squills—100 Pd.—3 Pd. sterl.

An export duty, however of ¼ the weight.

Ambra grisea.—Of this an ounce, according to the quality, costs one half to one Spanish dollar. But as much again is exacted in duty; whoever exports it, then, pays one to two Spanish dollars the ounce.

Cotton, the pound, 2 bits; or 150 Pd. 5 Pd. sterl.

Lignum vitae, the ton—about 8 Span. dollars.

Brasiletto, the ton—about 25 Span. dollars.

Campeachy-wood, the ton—about 25 Span. dollars.

Mahogany, in boards, 100 ft.—about 8 Span. dollars; but the boards must be about a foot wide, and 3-4 in. thick.

Mahogany and Madeira, in blocks, the ton, 24 Span. dollars.

Pineapples, the dozen, 1 piece of eight, 1 Span. dollar.

Limes, the thousand, according to the season, 1-2 Span. dollars.

Oranges, the hundred, according to the season, 1 Span. dollar.

Turtles, the pound, about 1 bit, or 5 pence sterl.

Turtle-shells, the pound, 10-12 bits.

Coffee, native growth, the pound, 2 bits.

Cedar posts, the piece, 12 ft. long and 3 inches in the square, 3-4 bits.

The grey amber is found among the rocks on the shore, but only by chance. Mr. Schwediauer has explained its origin in the Philosoph. Transactions with great plausibility, showing that it is an excrement of one or another sort of whales. Very recently a woman found a large piece which the waves cast into her hands as she was occupied by the shore; she did not know what the substance was, and since it stank strongly according to her sense, she threw it away. Several years ago there was a man here who counterfeited grey amber, making a great quantity from wax, salt, pepper, and other things; selling a part for some hundreds of pounds sterling, but the fraud was detected in good time.

Now and then are to be seen lying on the shore fragments of true pumice stone. Presumably these come from certain of the West India islands on which there are volcanoes.

On the rocky shores of one of the southern Bahama islands there is found a great store of hardened bitumen. During the war this was used here at various times for caulking ships, and it was found to answer the purpose very well; it was even believed that by it ships were kept freer of worms than by the common pitch. But the latter now being again to be had cheap enough from North America, the use of the other has been discontinued. Similar earth-pitch occurs in other of the West India islands, often of a softer nature, or still viscous and pliable, and is known as Barbadoes tar.

Ships' bottoms in the West India waters grow soon foul, all manner of muscle-fish, cockles, and other vermin attacking them, and hindering the passage of the keel through the water, and besides, various kinds of worms bore into the planks and help to rot them. A ship which lay 6 months in the harbor of Havanah, brought away a coating several inches thick of every sort of vermin, which had fastened over the entire bottom. There were small oysters, and the so-called mangrove-oyster; *Lepades, Actiniae, Ascidiae, Nereides* &c. To prevent this the Bahama buccaneers at one time made use of a particular kind of ant-hills to be found in the woods here; mixing the ashes of 40-50 or more of these ant-hills, burned, with the pitch and tar they used to overlay their ships' bottoms. But this being no longer the practice, I suppose the method was not found to answer in keeping off the worm. These ant-hills are of a conical shape; I have seen them as much as four and a half feet high, and more than two feet through. They consist of a very brittle,

brown substance, earthy or resinous-earthy. The ants are white.

Because of unfavorable winds I made a vain attempt, in a boat specially hired, to visit the eastern islands, particularly Exuma.

Another time I visited Rose Island, whither we were four hours on the way from Providence, passing many Keys as they are called, single rocks upstanding bare and barren. These make a splendid and rare spectacle, what with their picturesque look and the mad tumult of the waves ceaselessly playing upon them, foaming and springing high. These Keys are almost all of them edged around with steep, sharp rocks, so that a landing can seldom be made, and then not without difficulty and danger. Shortly before sunset we approached Rose Island, through a narrow, rocky bight where a steep wall must be climbed on landing. The island is very small. A fisherman was living among the rocks in a hut made of palmetto-leaves, and he with his family compose the garrison of the island. Truly an ocean hermitage; its only neighbors black points of rock here and there dismally emergent from the sea. The island is quite grown over with bush, in the middle a spring of sweet water, without which living here would be impossible. Night coming on splinters of **Torch-wood** (*Amyris sylvatica L.*) served for lights. This torch-wood (light-wood) is a slender tree, its wood very resinous, fat, and black; its leaves are egg-shaped, pointed, always 3 and 3 together, and of a sharp taste, like pepper.

The wife and children of the fisherman were engaged in boiling in a great iron kettle the fruit of a tree which they call the *Mastick-tree* (*Ximenia inermis*

L.). This tree also grows in plenty on the other islands, and to a large size. Its fruit, improperly called mastick-berries, is of the shape and size of a large olive, smooth and yellow-green, and containing a hard, smooth, egg-shaped kernel. To the taste it is rather tough and clammy; it is not a pleasant food eaten raw nor wholesome, it is said. But cooked it is used for the table or preserved in sugar. For the latter purpose it had been gathered and was preparing by this family, for sale in the town at one and a half bits the quart. To lighten the labor of gathering, it was their practice to fell the tree. The wood of the mastick-tree is especially good for pales and palisadoes, lasting extraordinarily well; it is so hard and heavy that it can scarcely be worked as long as it is green.

We slept the night on the ground, on a coverlet of pleated palm-leaves. The entire hut, roof and walls, was covered with palm-leaves; the noise among these dry leaves made by the least wind is so like that of a falling rain as to startle the unaccustomed from their sleep, fearing they may get wetted. But the leaves are so skilfully woven that if the work is done with any diligence they keep out the heaviest rains. In this way the poorer inhabitants of these islands build their houses with little trouble and no expence, the walls under these warm skies needing not to be very thick. They have small care about supplies for winter, the earth and the sea yielding one or another sort of food throughout the year, and the climate calling for few clothes, thus it costs them very little to satisfy the essential wants of life, and they live as simply and frugally as their more conspicuous neighbors do wantonly and profusely. Their poverty does not keep

them from being heartily content. The so-called planters work, all told, perhaps not more than two, at most three months in the year. They fell some wood, catch fish, sell what they raise—drink up their gains and dance away the time, for not even the hottest weather can keep them from this diversion. They are amiable, courteous, and according to their circumstances hospitable—but of severe work they know nothing and do not want to know anything. Hence if it is true that the harder and more tedious the life of a country is, the less does its population increase, the favorable circumstances of the Bahama islands must show the opposite effect.

Even the blacks here take part in the general contentment. They are everywhere of a better appearance, breathing happiness; strong, well-fed, and of a decent demeanor. Many of them are free, or if they are slaves, by paying a small weekly sum they are left undisturbed in the enjoyment of what they gain by other work. Some of them own houses and plantations, and others are even put in command of small vessels. The slaves here never experience the inhuman and cruel treatment which draws so many sighs from their brethren on the neighboring sugar-islands or the rice plantations of the main-land.

Returning from Rose Island we saw a few other small islands, and found them all to consist of the rock which has been often mentioned above. Here and there lay great rock-plates, split but still of bed and strata formation; elsewhere in great disorder. More than once, however, there were to be observed corals, madrepores, and similar bodies in the substance of the rocks. On Hog Island we saw, as a great curiosity,

certain places, of the extent of one or more acres of land, quite clear of rocks and showing good, black, rich earth. Although similar but smaller spots are to be here and there found, no use can be made of them, because they lie everywhere in the lowest situations with no outlet, and none possible, for the rain-water which accumulates in them. Otherwise such places would be of endless value. On Hog Island these spots are useless besides, because of the land-crabs which destroy the roots of everything planted there by way of experiment.

Salt is made on a few of the small outer islands, by evaporation of the sea-water in open pits. Why this is not done more, is a question. The greatest part of North America is supplied with salt from **Turks** and other small West India islands. It is a tradition hereabouts that it never rains over the salt-pits,—a few even go so far as to pretend that a rain-cloud divides when it passes over salt-pits.

The winds of this region blow from March to September almost continually from the East, and are in general, from the same causes as the **Trade-wind,** fixed between the Tropicks, however the nearness of the continent gives occasion now and then for brief interruptions on the part of the West wind. Then there are light South winds with alternating calms, during which the greatest heat is felt. During the winter months the winds are changeable from all directions. The rainy season falls in May, June, and July. The last of April and in May of this year the leaves hung wilted and dry on the trees, from long drought. There is seldom any dew at night. The Bahama islands are not, as is often asserted, outside

the track of hurricanes; no longer than three years ago they were exposed to the fury of one which did much damage to shipping and houses. According to the observations of a Mr. Rose, 93-96 Fahr. is the highest point shown by the thermometer, and the lowest is 45. On the whole, this is a desireable climate; only some 2-3 hot months, and for the rest of the year a continual spring, with an air clear and temperate. Many sick and ailing persons therefore take refuge here with good results.

Alligators are plentiful among these islands; but in size they yield to those of the continent.

Divers other lizards, in part figured by Catesby, are everywhere abundant. The finest of them is that with the sky-blue tail (*Lacerta striata L.*). They are extremely swift and difficult to catch; their tail as brittle as glass: if one is quick enough to seize them by it, it comes away in his hand for his pains. Another small lizard was, sitting on a cactus, green, caught and put in a box, brown, and again green after it was dead. Still another, with a brilliant crop, hanging down long and flat on the throat, was at first brown, and then after death whitish, and later grey. On Rose Island there is a lizard, some 6 inches long, called by the inhabitants **Guana-lizzard**; it is of a greyish-brown color, keeping by day near the water on the shore, but not going into the water; when it runs it carries its tail raised.

In shallow and rocky places along the shore are found black and white sea-urchins (*Echinus*), divers sea-stars (*Asterias*), sea-hares (*Tethys*), and two species of wing-worms (*Clio*), the one with black tiger-spots, the other without spots; both, when seized,

give out a dark purple-red liquid. Among the many nettles (*Medusa*) there was remarked one variety green, and several rose-colored.

Unfortunately we could not lay hands on glasses here or any other suitable vessels in which to preserve such creatures for more careful examination; nor at the time could any paper be had in Providence for putting up plants.

Among insects the **Chiggers** (*Pulex penetrans L.*) are no small plague to the inhabitants here. These are not confined to the Bahamas, but are spread over all the West India islands and the warmer parts of North America as far as Carolina and even Virginia. This vexatious animalcule lives in the sand and the floors of dwelling-houses. It is difficult to avoid its lodgment in the skin. It attacks oftenest the soles of the feet, and other parts of the lower limbs, but does not spare the rest of the body. One is scarcely aware of the first approach, but after a short time the troublesome guest declares itself by a very disagreeable itching, and at the spot where the chigger is, there is a little rise of the skin, of the same color with it and at first hardly perceptible, in the middle of which is a small brown point denoting the site of the beast. Once quite burrowed beneath the skin, it begins forthwith to lay its eggs, which are enclosed in a peculiar white case; the chigger is then found with the hinder part of its body in this egg-sack, only the head, proboscis, and a few fore-feet protruding, but the whole quite covered by the skin. Such an egg-sack, partly from the number of eggs laid in it, partly from the increase of the hatched brood, may grow to the size of a pea and cause violent pain. If through carelessness, sloth,

lack of self-attention, this egg-sack is not removed in time, the young chiggers mature, creep out, eat farther on beneath the skin, make new nests, and rummage through the whole foot. In so hot a climate, and where there chance to be foul humours in the body, occasion is thus given for vicious sores, severe inflammations, and even gangrene, so that at times it has been necessary to take off the limb. There is no sure preventive against chiggers; people indeed who go much barefoot, afford them more of a field, but stockings and shoes are no protection. Certain people are quite free of this plague, even chiggers having their selective taste. Is one attacked by them, or apprehensive of attack, he must have the soles of his feet examined daily, for that is the ground they choose first and like best. The black women are very skilful in this regard; with a needle or a sharp pointed knife they carefully dig out the insect and the sack as well, when this has been formed. There must be care taken to bring out the whole sack, unbroken as far as possible; for any eggs remaining behind set up pains and inflammation, and one must also be careful to see whether mature eggs have been fully hatched. Usually a little snuff-tobacco is sprinkled in the wound. A European once had the conceit to take this western pest back home with him as a curiosity alive in his feet; but the incessant pain compelled the queer collector to rid himself of his curiosities on the voyage. On my return voyage, after we had been already a week at sea, I observed a hard little swelling between the index and the middle finger of my right hand, without in the least suspecting that a chigger had nested there; the continual itch and the considerably

increased swelling started the supposition not until many days later, and on examination a chigger-nest was really found, with the flea infixed and at least 70-80 eggs.

Centipeeds and ground-spiders, likewise dreaded, did not come within my observation. Another pest here is the little ants which crowd in by millions wherever there are eatables, sugar and the like kept. Finally, there are in the bush swarms of troublesome midges and sand-flies.

The greatest part of the plants here are everlasting and ever-green. Thus, if this group of islands is lacking in properly arable soil, easy to work, the appearance of things is none the less pleasant and cheerful. The groves, cross cut by many paths and roads, form a beautiful evergreen garden, where bloom and fruit are continually alternating. Most of the indigenous plants bloom twice a year; particularly during and after the rainy season, in June and July, and in the temperate Autumn months. The months of April and May, the time of my visit, are dry and unfruitful months, during which the flora here exhibits least its beauties and rarities.

Here shrubs and trees are in great disproportion to the more delicate, annual plants, of which there are but very few. Moreover the leaves of most of these shrubs and trees are of a firmer, parchment-like nature, and their wood is dense and heavy. Although plants of this character are better adapted for withstanding great heat, nevertheless at the time of my visit, after a persistent drought, shrubs of firm, laurel-like foliage as well as those of a more delicate leafage, stood for

the most part wilted, if not refreshed now and then by a dew at night.

Of the trees, either originally indigenous or transplanted, the following are to be set down, in addition to those already mentioned, as remarkable or useful.

The Papaw or Melon-tree, *Carica Papaya L.* (Trew: Ehret, Tab. VII), is planted for its fruit in gardens and about plantations, the fruit, cooked before it is full ripe, making a not unpleasant dish. It is believed here that if it is put with hard, tough meat, the same grows softer and more digestible. The little seeds have a sharp, aromatick taste. The trees are not very tall, sparsely leaved, and of a white, spongy wood.

The Guavas, *Psidium pyriferum L.* (*Guiava,* Trew: Ehret. t. 43), and *Psidium pomiferum L.,* are also transplantations; they are indigenous to Hispaniola. From their fruit confitures are made, as also from that of the Mammee, *Mammea americana L.*

The Avogado-tree *Laurus Persea L.* On a deserted plantation behind the town there are a few of these trees, large and handsome. The pear-shaped fruit, which ripens in September, is excellent of taste.

The Banana-tree, *Musa paradisiaca L.,* is grown abundantly in all gardens.

The common fig tree, *Ficus Carica L.,* bears three times a year, heavily, and good fruit, and deserves to be more raised, for the fruit of the indigenous fig, *Ficus benghalensis L.,* is small, dry, and uneatable. The pomegranate also yields well-tasting fruit. Among the transplantions belong also, the Paternoster tree, *Melia Azedarach L.;* the soap-tree, *Sapindus Saponaria L.; Nerium Oleander,* and *Magnolia grandi-*

flora L. Further, the Silk-Cotton-Tree (*Bombax pentandrum L.*) the seed-case of which yields a very fine, light brown wool. The tree is comely, large and strong; the branches of the one I saw, no doubt the only one on the island, shaded a circuit of at least a hundred yards. The *Hura crepitans L.* (Trew: Ehret, t. 35) called the 'Sand-box' from the use made of its seed-cases. The ripe, dry cases split with a loud clack; the unripe are bored through and used for strew-sand boxes, from their star-shaped openings being very well suited to the purpose. The seeds, like almonds in form and taste, are drastick. The fine growth of the tree makes it a favorite for shading walks, and the trunk yields excellent boards. *Aeschynomene grandiflora L.*, 'Chicken-peas,' a tree of very rapid and tall growth, recommends itself by its large, splendid blooms, and the seeds are good forage for poultry.

The Cashew or Acajou, *Anacardium occidentalis L.*, is met with on sundry plantations. The coco and the date-palm have both been transplanted; they thrive and bear much fruit. But the dates here are small and of a harsh taste.

Among the indigenous palms the inhabitants distinguish four different varieties, naming them, according to the use made of them, as follows:

'Great-Thatch' and

'Brittle-Thatch Palmetto,'—the leaves of which are used in the roofs of their cabins.

'Silver-Thatch,'—on account of the leaves being supplied below with a silver-colored down. The younger leaves are employed chiefly for making the rough nets and tackle used by the fishermen

here. The top of the tree is eaten, as is also that of the

'Cabbage tree,' or common cabbage palm. The soft stem of this palm is eaten by hogs.

Of the first two I have seen neither blooms nor fruit. Probably they are varieties yet indeterminate. All of these grow by preference on the shore, making here and there pleasant little forests; but palms reach no great height here; at least one does not often find them more than 12-15 feet high.

To be counted among the indigenous edible fruits are: the several varieties of the custard-apple, *Annona glabra, palustris, triloba,* and *muticata L.,* the Jamaica or 'Wild Cherries,' *Malpighia glabra* and *urens,* which bear pleasant, sourish berries, not unlike the cherry. The Sapadilla, *Achras Sapota L.,* a small, round, milky fruit which, when well over-ripe is regarded by some as an especial delicacy and is used for tarts. The coco-plum, *Chrysobalanus Icaco L.* Saffrons, the fruit of a shrub with oval leaves having a brownish down beneath; in shape like cornil-berries, of a long hard kernel, purple-colored or blue, and of a sweetish sleek taste.

The 'Pidgeon-plums' (*Cerasus latiore folio, fructu racemoso purpureo majore.* Catesb. II, tab. 94) supply the wild pidgeons, and the dry yellowish fruit of the 'Hog-plum tree' (*Spondias Mombin L.*) serves as food for the hogs.

The poisonous mancinella, (*Hippomane Mancinella L.*) occurs on Andros Island. The mangle-tree, *Rhizophora Mangle L.,* grows everywhere along the shores.

In the bush and the woods there are finally great

numbers of varieties of splendid plants, of which at this season but few were in flower. Certain of them are peculiar to the Bahama islands, others are found throughout the West Indies and in the warmer regions of the mainland. Not wishing to repeat all those names of plants mentioned in my description above, nor intending to give a complete list of the plants of Providence (out of the question both from the briefness of my stay and from other conditions as well), I will indicate only a few of the more common plants blooming in April and May:

Boerhaavia scandens.
Justicia spinosa.
Verbena lappulacea, curassavica and nodiflora.
Salvia serotina. The infusion is used in fevers.
Proserpinaca palustris.
Commelina communis.
Kyllingia monocephala.
Paspalum distichum.
Agrostis indica.
Agrostis tenacissima, Jacquin, *Ic. tab.* 16, collect. I, p. 85.
Catesbæa spinosa.
Cissus sicyoides.
Cissus trifoliata. (Almost smooth, and with no marked wings on the stalks. Caterpillars in the leaves.)
Fagara Pterota.
Rivina humilis and lævis.
Ilex cuneata.
Heliotropium parviflorum, curassavicum and gnaphalodes.
Tournefortia volubilis.

Convolvuli spec. (Salve-leaf).
Ipomœa triloba, and other varieties.
Conocarpus erecta (Button-wood) and racemosa.
Psychotria asiatica.
Chiococca racemosa.
Scævola Lobelia.
Erithalis fruticosa.
Physalis curassavica.
Solanum verbascifolium, racemosum, bahamense.
Cordia Sebestena.
Ehretia tinifolia and Beureria.
Cestrum vespertinum.
Chrysophyllum Cainito.
Hedera quinquefolia.
Illecebrum vermiculatum.
Vinca lutea.
Plumeria rubra.
Echites umbellata, biflora and others.
. . . . . Arbor jasmini folio, floribus albis, fructu ovali, feminibus parvis nigris mucilagine involutis. Catesb. I, t. 59. Seligm. *Vög.* 3, t. 18 (Seven years' apple).
Asclepias curassavica, and others.
Turnera ulmifolia.
Xylophylla latifolia.
Tillandsia polystachya, lingulata and others.
Tradescantia virginica.
Pancratium caribæum?
Orontium aquaticum.
Achras salicifolia.
Bursera gummifera. Terebinthus major &c. Catesb. I, t. 30.

Amyris sylvatica (Torch or Light-wood)—toxifera (Poison-wood). Catesb. I, t. 40. Seligm. *Vög.* 2, t. 80.
Amyris Elemifera, and bijuga.
Ximenia inermis (Mastick-tree).
Coccoloba Uvifera.
Paullinia Seriana.
Cassytha filiformis.
Cassia emarginata, obtusifolia, occidentalis, biflora (Pock-root), ligustrina (Wild Senna, purgative), and others.
Poinciania pulcherrima.
Guilandina Bonducella (Nickers).
Melastoma discolor.
Banisteria angulosa.
Suriana maritima.
Euphorbia hyssopifolia?, heterophylla, and others.
Cactus Tuna.
Eugenia Pseudopsidium.
Sesuvium Portulacastrum.
Argemone mexicana.
Corchorus hirsutus.
Bignonia pentaphylla, and cærulea.
Lantana Camara and involucrata.
Capraria biflora.
Stemodia maritima.
Duranta Ellisia.
Cleome pentaphylla.
Sida crispa, and others.
Hibiscus tiliaceus.
Abrus precatorius.
Erythrina Corallodendron. Trew, t. 8.

Cytisus Cajan.
Hedysarum canescens.
Indigofera argentea.
Dolichos, sundry varieties.
Bidens nivea.
Ageratum conyzoides.
Amellus umbellatus?
Buphthalmum frutescens.
Serapias and Limodorum, sundry varieties.
Passiflora cuprea, rubra, Vespertilio, and others.
Helicteres jamaicensis, Jacquin.
Arum sagittæfolium.
Parthenium Hysterophorus.
Guettarda speciosa.
Croton Cascarilla, glabellum, argenteum.
Smilax, sundry varieties.
Juniperus bermudiana.
Andropogon repens. Gramen dactylon americanum cruciatum, barbadensibus nostratibus Dutch-grass dictum. Plukenet, *Phyt. tab.* 189, fig. 7, and tab. 245, fig. 1.
Clusia rosea, flava.
Gouana domingensis.
Mimosa circinalis, Cat. II, t. 97, pernambucana, Unguis cati, farnesiana, arborea, glauca, and others.
Pisonia aculeata.
Acrostichum aureum, polypodioides.
Asplenium rhizophyllum, marinum.
Polypodium phyllitidis, pubescens.
Adiantum clavatum.
Zamia pumila, Trew, t. 26.

As regards the total number of the settled, unsettled, or uninhabitable Bahama islands there is so far quite as little exact information as of their situation and extent, with other of their characteristics worthy to be known. Including all the keys, all the larger and smaller islands, the number is reckoned at several hundreds. There is moreover no accurate and reliable chart of these islands; for that drawn by Captain Romans ✝ is said to be based more on the accounts of others than on the author's own survey. Hence there is still wanting a sure and fixed guide for sea-farers among these labyrinthine islands, and the pilots, indispensable to vessels both large and small, must in finding navigable channels rely on their own knowledge, often gained, alas, by insufficient experience, trusting merely to their memory.

Providence Island itself is not yet thoroughly known; its length is estimated at 25-30 miles, and its breadth at 6-9. The other more important islands, most of them settled in a fashion, are:

Harbour Island, Abaco, Long Island, Lucaya, Andros, Eleuthera, Mayaguana, Exuma, Ynagua, Great Bahama &c. The most of these, certainly very many of them, are narrow and long, running from north-west to south and south-east. Providence lies more east and west.

Cat Island, one of the smaller of the group, is remarkable for being the first land of the West trodden by Christopher Columbus on his voyage of discovery in the year 1493; he gave it the name St. Salvadore.

Andros Island, it is said, is one of the most valuable of the Bahamas; possessing much excellent land, ex-

tensive savannas, splendid store of useful woods, much fresh water, many bights and bays affording good landing-places and some of them stretching far inland.

The Bahama islands were discovered for the second time, in the year 1607, by Captain William Sayle, who established claim to them in the name of England. All these islands were bestowed by the crown on the then Proprietors of Carolina, the lords Albemarle, Craven, Carteret, &c, who only resigned their rights to the crown at the beginning of this century, after they had found by experience that these islands, settled by turbulent, stubborn people mostly living by piracy, were under their government falling more and more into decay. Throughout the preceding century these islands, and especially Providence, were the resort of men * who lived lawless carrying on piracy, which they called buccaneering, in the West Indian waters and on the coasts of the neighboring Spanish islands. They refused all obedience to the governors sent out by the Proprietors, and at times compelled them to withdraw. In the War of Succession at the beginning of this century, the Spaniards fell upon these islands, destroyed and plundered everything, and took off the greater part of the inhabitants captive; the remnant hid themselves in the woods or were scattered elsewhere. Shortly after this attack the proprietors gave

* Histoire des Pirates Anglois depuis leur établissement dans l'isle de la Providence jusqu'à présent, avec la vie & les avantures des deux femmes Pirates *Marie Read* & *Anne Bonny;* traduit de l'anglois du Capitaine *Charles Johnson.* Utrecht. 1725. 8°.

over their right to the islands, which they were unable to keep in order, make flourish, or protect from hostile aggressions. In the year 1717, under George I, Woodes Rogers was sent over to Providence with a sufficient garrison, as the first royal governor. To him the buccaneers found there gave themselves up, in part of their own accord; the scattered inhabitants returned, and there were new-comers to join them—and from that time order and quiet began on these islands, the one-time sea-robbers becoming respected residents, consuming their gains in peace. At the present time the affairs of these islands are administered by a Governor, in the name of the King; but the people of all these islands elect from among themselves an Assembly, consisting now of 21 members, who meet annually and take into consideration the business and the rights of the widely scattered people.

Providence, and with it all the Bahama islands, was in the last war conquered by the Spanish in conjunction with the Americans. A fearfully large fleet was directed against this small and, at that time, defenceless island. The conquest therefore was no more glorious than, during their possession, was the behaviour of the Spanish, who showed little of nobility or largeness of mind. The re-conquest for England took place in the year 1783. The Spanish governor, Don Caracca, with a garrison of near 500 men, let himself be surprised and frightened into a surrender by a small and badly armed corps of 80 volunteers and 3 Indians, who had been collected with difficulty by the enterprizing Major Devaux, partly in Florida, partly on certain of the islands.

To return to Europe I seized the first opportunity offering, and repaired on board the ship Hero, commanded by Captain Bryan, a Bermudan. It was a small, light built, but fast-sailing ship, lying with its cargo deep in the water; the cargo was made up of mahogany, brasiletto, lignum vitae, pineapples (several thousand), and live turtles. The turtles, all together 2400 pounds' weight, were distributed in 64 large hogsheads. These heavy casks, which were filled with sea-water besides, crowded the deck and made a very heavy load, increased by anchors, firewood, the drinking-water for the voyage, and the like, these having to lie out, there being no room for them in the hold. In this way the little ship carried near 30 tons' weight on deck, and was 'top-heavy' as the sea-term is, (heavier above than below) and this rash lading had almost ruined us.

We left the harbor of Providence June 7th 1784, had fair winds and weather the first week, passed the Summer or Bermuda islands with no mischance, and then held towards the coast of America so as to get into the path of the west winds commoner there. This region is famous for its many and sudden storms, or as the saying is:

If the Bermudas let You pass
You'll get it at Cape Hatteras.

We found it a true proverb. On the 15th of June while we were sailing with a light wind and a fine sky between the Bermudas and Cape Hatteras, we were hit by a squall so suddenly and with such fury that all on board must regard our lucky escape as in the circumstances very extraordinary. The whole

crew, quite familiar with the West Indies where they had experienced many hurricanes, swore to a man that they had never come through such a raging wind, rising so swiftly. To be sure it held on scarcely more than 12-15 minutes, but it struck the ship violently so that it could hardly get through the water fast enough, and the waves broke in streams over the peak. The masts bent before the wind; the sails, which there had not been time enough to take in, were torn on the instant and the shreds went flapping with a fearful noise. To lighten the weight on deck the turtle-casks were stove in, fire-wood, many chests, and all sorts of baggage were jettisoned. The sailors waded in water knee-deep on deck, where everything was in apparent confusion. Amid the deafening noise of the wind and the waves, and the tumult of the ship's people working at an anxious tension, might be heard now supplications and sighs, now curses and imprecations. We owed our escape first to the dispensation of Providence and then to the firm spirit of the captain who succeeded, not without hard work and the assistance of several strong men at the wheel, in keeping the little ship straight before the wind; the first blow from the side, or the first cross-sea, would inevitably from the nature of the cargo have overturned and sunk us. Hardly was the danger over, when everything was forgotten, as is the sailor's way. We then spoke of our fears; the sailors took to their grogg; making sport of each other for their frightened looks and behavior, and setting at once to work repairing the much damaged sails and tidying up the ship. We lost by this chance a part of our store of fresh water, and from then on the allowance was a quart and a half

(later a quart) to a man. And so we had but little water, but what we had was very good; taken from the dug wells of Providence above described, and lasting throughout the voyage, clear, pure, and of the best taste and smell.

The rest of the way no further mishap befel us; on the 30th day after our sailing we got sight of Start Point, at the entrance of the channel, and two days later came safe into the Thames.

Appendix

[Prefix to Vol. II, 32 pp. "Fragment of a Treatise on Climate and Weather in North America." Appearing originally in Meusel's *Hist. Literatur,* 1781. Republished perhaps as a pamphlet enlarged, which has been translated by Dr. J. R. Chadwick, Boston, (Houghton), 1875. 8vo, 31 pp. "*Climate and Diseases of America.* By Dr. Johann David Schoepff, Surgeon of the Anspach-Bayreuth Troops in America.]

No. IV

Regarding the Establishment of the German College at Lancaster in Pensylvania and of other Institutions for the Education of Youth and the Furtherance of the Sciences.

Petition and Act of 1786. [Vol. II, pp. 503-521. From *Gemeinnützige Philadelph. Correspondenz,* No. 299. 1787.]

No. V

An die lieben Deutschen. Relative to the College at Lancaster; signed A. M. with Answer signed Philomathes.

[Vol. II, pp. 522-529. From *Gemeinnützige Philadelph. Correspondenz,* No. 304, No. 310, 1787.]

No. VI

Plan for the Establishment of Free Schools in Philadelphia. Plan of the Urania Academy, for the Betterment of Church-singing.

[Vol. II, pp. 530-542. From *Gemeinnützige Philadelph. Correspondenz,* No. 310, 311, 1787.]

No. VII

To the Publick. Specifications relative to the medallion to be given annually by the American Philosophical Society.

[Vol. II, pp. 543-548. From *Gemeinnützige Philadelph. Correspondenz,* No. 294, 1786.]

No. VIII

Medicinal Waters, for drinking and bathing, at Harrowgate, about four miles from Philadelphia near the Frankfort Road. Advertisement of George Esterly.

[Vol. II, pp. 549-551. From *Gemeinnützige Philadelph. Correspondenz,* ✝ No. 265, 1786.]

Notes

[The reference in the text is by a ✝]

Preface—The Preface to Vol. II, although short, has not been given entire; it is mainly in regard to the fragment of an article by Dr. Schoepf on the climate of North America, which appears as a prefix to Vol. II. The appendices, also omitted in this text, are explained, and apology is offered for including in Vol. I the sketch map of North America, taken from Bailey's *Pocket Almanac,* Philadelphia, 1785. Dr. Schoepf states that his meteorological observations have been confirmed by those of Williams, made at Cambridge in New England with Mannheim instruments, and published in *Ephemerid. Societat. Meteorolog. Palatinae anni 1785.* This was Samuel Williams [1743-1817], teacher of Count Rumford, and Hollis Professor of Mathematics at Harvard, 1780-1788.

P. 5—With respect to the Western country, it is interesting to observe the remark in the *Freeman's Journal* for Dec. 31, 1783, that common funds from public lands should serve as "a cement to bind the confederacy."

P. 14—See, *Life of William Henry, of Lancaster, Pennsylvania.* By Francis Jordan, Jr. Lancaster, 1910. Chapter VI.

Simon Stevinus operated a wind-carriage as early as 1600, on which Grotius, who was a passenger, made an epigram.

P. 19—The Preface of *Chronicon Ephratense,* signed 'Lamech and Agrippa,' is dated April 14, 1786. See, translation by J. M. Hark, Lancaster, 1889.

P. 22—"There may be from 7000 to 8000 Dutch Waggons with four Horses each, that from Time to Time bring their Produce and Traffick to Philadelphia, from 10 to 100 Miles Distance."

Douglass, *British Settlements.* Boston, 1750, II, 333.

P. 23—The quotation is, perhaps, from Justus Möser (1720-1794), "Patriotic Fancies," 1775.

P. 26—Dr. Schoepf, late of the allied troops from Germany, could scarcely expect invariable courtesy on the part of those Americans speaking his language.

P. 32—Cf. the Abbé Robin's *New Travels,* (Philadelphia) 1783—under *Maryland.*

P. 38—By this time news of the Peace should have reached Virginia. Cf. *Freeman's Journal,* Dec. 3, 1783—"Last Sunday arrived the Lord Hyde Packet from Falmouth, 47 days. From the English papers brought we have extracted the following important advices" [regarding the Definitive Treaty].

P. 42—See, *Acts of Assembly* (Virginia), 1777, p. 19, ch. XII—"James Hunter, near Fredericksburg, hath erected and is now carrying on at considerable expense and labour, many extensive factories, slitting, plating and wire mills."

Cf. Jefferson's *Notes,* Sec. VI.

P. 44—See, Letter of Roger Atkinson, 1772, *Virginia Mag. of Hist. and Biog.,* XV, 345—"Sir, it

is w'th great Pleasure I acq't you that we have now got another staple of late years, as it were created, viz.: Wheat, w'ch will I believe in a little time be equal if not superior to Tob'o—is more certain & of w'ch we shall in a few years make more in Virg'a than all the Province of Pennsylvania put together, altho' it is their staple commodity."

P. 56—Robert Lawson, of Prince Edward County, Colonel 4th Virginia, 1777, and Brigadier General, Virginia line, 1781. Cf. Calendar of *Virginia State Papers,* Vols. I and II.

P. 61.—*The Virginia Gazette & Weekly Advertiser.* There was a *Virginia Gazette and Norfolk Intelligencer* as early as 1774, and there was a *Virginia Gazette and American Advertiser* published at Richmond in 1786, which was possibly the same as the *Weekly Advertiser.* The old *Virginia Gazette* of Williamsburg was merged with a Richmond paper about 1799. The construction given the word 'Gazette' is seen also in the name of a paper published at Baltimore about 1800—*Federal Gazette and Baltimore General Advertiser.*

P. 62—Jefferson's *Notes on Virginia* appeared at Paris, 1784 (1st ed., dated 1782); 2nd edition, Paris, 1786; 1st English edition, London, 1787; 1st American, 1788 (Philadelphia, Pritchard and Hall).

P. 63—See, *Separation of Church and State in Virginia.* By H. J. Eckenrode, Archivist. pp. 155. *Va. State Library Report,* 1910.

P. 64—Formicola had come to Virginia with Lord Dunmore, the last royal Governor; he had formerly

been in Russia. Cf. Chastellux, *Travels in North America &c.* Dublin, 1787. II, 154.

P. 67—The projector was John Mayo [1760-1818] who after many difficulties succeeded. His daughter married Gen. Winfield Scott.

P. 67—This mine of John Chiswell's was worked as early as 1766. See, will of John Robinson, *Virginia Mag. of Hist. and Biog.,* XVII, 319.

Cf. *Acts of Assembly* (Virginia), 1776, p. 42.

Colonel Byrd mentions a Chiswell in 1732 (*Progress to the Mines,* p. 343 ff.) who was interested in iron works near Fredericksburg.

"Copper near the Roanoke"—The Virgilina Belt, described by Colonel Byrd in 1733 (*Journey to Eden*), see Bassett, *Writings of Colonel William Byrd.* New York, 1901, 283-85.

P. 67—The Midlothian mines, once celebrated, the history of which is not enough known, and would be very difficult to determine.

P. 68—E. g., *Gentleman's Magazine,* Vol. 56, p. 801, (1786). See, Note, Vol. I, p. 291.

P. 70—See, Jefferson's *Notes,* Sec. VI—Mineral resources of Virginia.

P. 70—See, Jefferson's *Notes,* Sec. VI—Mineral claimants are mentioned in the Senate Journals (Virginia) as present Dec. 18th, 19th, and 22nd. Names occurring are Elie Toutant Beauregard, son of James Beauregard, Charles Gratiot, attorney, and Savary de Valcoulon, agent of Coulougnac & Co. One of these claims was for supplies furnished Col. John Todd, in 1779.

Cf. *Albert Gallatin.* By John Austin Stevens [American Statesmen Series], Boston, 1891, pp. 19, 22.

"At Boston Gallatin made the acquaintance of a French gentleman, one Savary de Valcoulon, who had crossed the Atlantic to prosecute in person certain claims against the State of Virginia for advances made by his house in Lyons during the war. He accompanied Gallatin to New York, and together they travelled to Philadelphia . . . . Soon after these plans were completed [purchase of western lands] Savary and Gallatin moved to Richmond, where they made their residence. In February 1784, Gallatin returned to Philadelphia."

P. 72—Near Petersburg at this time lived Dr. James Greenway, (grandfather of Gen. Winfield Scott), an industrious botanist whose notes were very useful to Castiglioni. The copy of Gronovius's *Flora Virginica* in the Library of Congress was once Dr. Greenway's and is copiously annotated in his handwriting.

In this neighborhood there had lived, a good many years earlier, the distinguished botanist John Banister, whose work is incorporated in Ray's *Historia Plantorum,* whom Ray calls 'eruditissimus vir et consummatissimus botanicus.'

Cf. Castiglioni, *Viaggio negli Stati Uniti.* I, 220-221.

P. 74—The colony had an old inheritance of Tobacco, which the state here and there yet finds difficult —Cf. Oldmixon, *The British Empire in America.* 2nd edition, London, 1741, (1st ed., 1708). Vol. I, p. 448, "The Trade of this Colony, as well as that of *Maryland,* consists almost entirely of Tobacco; for tho' the

Country would produce several extraordinary Commodities fit for Trade, yet the planters are so wholly bent on planting Tobacco, that they seem to have laid aside all Thoughts of other Improvements. This Trade is brought to such Perfection, that the *Virginia* Tobacco, especially the sweet-scented, which grows on *York* River, is reckoned the best in the World, and is what is generally vended in England for a home consumption. The other Sorts, called *Oranoac,* and that of *Maryland,* are hotter in the Mouth; but they turn to as good an Account, being in demand in *Holland, Denmark, Sweden,* and *Germany.*

P. 79.—This was the foundation of Robert Boyle, the philosopher, called the Brafferton Foundation, from an estate in England in which the funds were invested.

Cf. Jefferson's *Notes* (ed. 1801, New York), p. 223.

P. 81—" Scotch merchants in Virginia before Revolution used to have a meeting twice a year, to decide on the rate of exchange, the price of tobacco and the advances on the cost of their goods. This was the substantial legislation of the Colony." Abstract of conversation with Madison, in 1827, by J. Burton Harrison. See, *The Harrisons of Skimino.* Edited by Fairfax Harrison. Privately printed, 1910, p. 92.

P. 82—It is possible that at Princeton (see, Vol. I), these shell-banks had been mentioned by General Lincoln, among whose scientific papers is a description of them.

P. 86—The first agricultural journal published in Virginia (*The Farmer's Register,* Edmund Ruffin,

Editor and Proprietor), bears the imprint, "Shellbanks, Va. Published by the Proprietor. 1834."

P. 87—See, Smyth, *Tour in the United States.* London, 1784, p. 15. "[Jamestown] once the metropolis of Virginia and still possessing several privileges in consequence thereof, one of which is sending a member to the assembly, or parliament; who is now Champion Traverse, esq. the proprietor of the whole town, and almost all the land adjacent, and I believe there are no more voters than himself."

P. 94—William Guthrie, *New Geographical, Historical & Commercial Grammar, and present State of the Several Kingdoms of the World &c.* 2nd ed., 1777, p. 670.

P. 94—Lying on a pallat &c is the manner of life particularly attributed by Smyth (*Tour in the United States,* I, 41) to the Virginia gentleman of fortune, who, says Smyth, rose about nine o'clock; whereas a man of the middling class "rises in the morning about six o'clock; he then drinks a julap, made of rum, water, and sugar, but very strong; then he walks, or more generally rides, round his plantation, views all his stock, and all his crop, breakfasts about ten o'clock, on cold turkey, cold meat, fried homminy, toast and cyder, ham, bread, and butter, tea, coffee, or chocolate, which last, however, is seldom tasted but by the women."

P. 95—"Virginia, although it is one of the Southern provinces, produces, none the less, sounder and stronger men, as well as horses. . . . It enjoys throughout the year, above all other provinces, a temperate, uniform weather, which imparts to animal bodies a greater de-

gree of strength, and at the same time of activity." *Fragment eines Schreibens über Klima und Witterung in Nordamerika,* appearing as a Prefix to Volume II, Schoepf's *Reise,* p. XXXI.

P. 100—See, Smyth, *Tour in the United States,* II, 238. "This swamp belongs to a company of proprietors, who have begun to render it of advantage and profit to them. They commenced with getting lumber, cypress shingles, and boards, and with incredible labour they have now formed several plantations therein, which produce immense crops of Indian corn. They have also cut a navigable canal, nine miles in length, from the great lake, for the conveyance of their lumber and produce."

P. 102—See, "An act for extending the boundary line between Virginia and North Carolina," Hening, IX, 561 [October 1778]—"Beginning where Joshua Fry and Peter Jefferson, commissioners from Virginia, together with others from North Carolina, formerly appointed to run the said line, ended their work, and if that be found to be truly in the latitude of thirty six degrees thirty minutes north, then to run from thence due west to Tenasee river."

P. 109—See, *American Husbandry,* London, 1775, I, 337, "The two great circumstances which give the farmers of North Carolina such a superiority over those of most other colonies, are, first, the plenty of land, and, secondly, the vast herds of cattle kept by the planters. The want of ports, as I said, kept numbers from settling here, and this made the land of less value, consequently every settler got large grants; and, falling to the business of breeding cattle, their herds be-

came so great, that the profit from them alone is exceeding great."

Cf. Smyth, *Tour in the United States.* London, 1784. II, 78-79.

P. 114—Achard, Franz Karl [1753-1821]. Founder of the beet-sugar industry; from 1782 Director of the Natural Philosophy section of the Academy of Sciences, Berlin.

P. 120—John Banister, the Virginia botanist, lost his life at the Roanoke Falls, in 1692. Cf. Goode, *Beginnings of Natural History in America* [Smithsonian Institution Report, 1897, II], p. 385-386.

P. 123—" In the streets and suburbs of Wilmington [North Carolina] the Pride-of-India tree (*Melia azedarach*) in very conspicuous, some of them twenty-five years old, having survived many a severe frost, especially that of the autumn of the present year, the severest since 1835."

Lyell, *Second Visit to the United States of North America.* New York, 1855, I, 219.

P. 128—See also, John Lawson, *History of Carolina, containing the exact description and natural history of that Country.* London, 1714.

P. 131—There were very few planters (possibly but one) in North Carolina at this time owning 200 negroes. See, *Heads of Families 1790—North Carolina,* Bulletin, United States Census Bureau.

P. 142—This operation is described at length in *American Husbandry.* London, 1775. I, 343-44. The pipe ran from the depressed-centre floor to a barrel, set in the ground some two feet away.

P. 150—See, Munford, *Virginia's Attitude toward Slavery and Secession.* New York, 1909, p. 105 ff.

P. 155—Pastor Adolph Nüssmann of St. Paul's Church, Cabarrus County, North Carolina. See, Bernheim, *History of the German Settlements and of the Lutheran Church in North and South Carolina.* Philadelphia, 1872, pp. 242, 257, 261.

P. 159—This was a short-lived industry on that soil and its day was then nearly over. Other sources of information are Smyth, *Tour in the United States.* London, 1784, II, 56-64; *American Husbandry,* London, 1775, I, 400-406; Castiglioni, *Viaggio negli Stati Uniti.* Milan, 1790, I, 323-326; *Virginia Almanac* for 1759—"Mr. Thomas Mellichamp's Directions for making Indico equal to the best French."

P. 170—Ratzel, in his sketch of Schoepf (*Allgem. deutsche Biogr.*), calls attention to this item of observation—"Vielleicht ist er der erste, welcher auf die regelmässige Drehung der Winde beim Uebergang aus NO zu S und umgekehrt, dieselbe, deren Gesetz Später Dove näher begründet, aufmerksam gemacht hat." All that Dove's biographer claims for him is that he correlated this shifting with the action of the barometer, and with moisture and temperature conditions. However, see, note in Lewis Evans's *Map of Pensilvania &c.* (1749)—"All our great storms begin to Leeward: thus a NE storm shall be a day sooner in Virginia than Boston." Cf. Phillips's *Maps of America,* under "North America."

P. 173—At Charleston Dr. Schoepf put together his *Beyträge zur mineralogischen Kenntniss des östlichen Theils von Nordamerika und seiner Gebürge,* pp. 194.

See Preface to that work, in which it appears that Schoepf came upon a copy of Lewis Evans's *Analysis of a general map of the Middle British Colonies in America* (Philadelphia, 1755) after his journey over the mountains. His views were confirmed by Evans. Both Jefferys and Governor Pownall (*Topographical Description,* 1776) made use of Evans.

P. 178—The *Schoepfia* (so named by Schreber in honor of his pupil Schoepf) is described in Rees's Encyclopaedia as nearly allied to the *Lonicera.*

P. 179—In the same year as Schoepf's Travels appeared Thomas Walter's *Flora Caroliniana.* London, 1788—the Preface dated, "Carolinae Meridionalis ad Ripas Fluvii Santee 30 Dec. 1787."

P. 184—See, *Transactions of the American Philosophical Society,* I, 117-198, "An Essay on the Cultivation of the Vine." By Edward Antill.

P. 208—Washington was the first Grand Master; the Baron von Steuben presided at the meetings held to organize the Society.

P. 210—"Considerations on the Society or order of Cincinnati; lately instituted by the major-generals, brigadier-generals, and other officers of the American army. Proving that it creates a race of hereditary patricians or nobility. Interspersed with remarks on its consequences to the freedom and happiness of the republic. Addressed to the people of South Carolina, and their representatives. By Cassius." Philadelphia, 1783. A Hartford edition also, perhaps of the same year. To which Considerations there was a reply, "Observations on a late pamphlet entitled 'Considera-

tions &c. clearly evincing the innocence and propriety of that honourable and respectable institution. In answer to vague conjectures, false insinuations, & ill founded objections." By an Obscure Individual. Philadelphia, 1783.

P. 214—See, Miller, *Retrospect of the Eighteenth Century*. New York, 1803, II, 402—"The Sciences of *Chemistry, Natural History,* and *Medicine,* have long been, and continue to be, more successfully cultivated in the Middle and Southern than in the Eastern States. The same reasons apply in this case that were suggested with respect to Classic literature."

Dr. Miller's pages (II, 492-506) furnish perhaps the best contemporary opinion regarding the eighteenth century college in America. Schoepf's enumeration (Vol. I, p. 77) should be corrected—not Washington College, Delaware, but Washington College, Maryland.

P. 235—Dr. Andrew Turnbull, a Scotchman, interested with Sir William Duncan in this enterprise.

Cf. Fairbanks, *History of Florida.* Philadelphia, 1871, p. 216.

P. 238—John Bartram's Florida Journal was published at London in 1766. William Bartram, his son, had been living in North Carolina, in business there, but joined his father in Florida, and being an observer himself published his Travels in the Carolinas, Georgia, and the Floridas at Philadelphia, 1791. John Bartram had held the post of Botanist to the King (George III).

P. 248—Schoepf's itinerary should be compared with Smyth's and Castiglioni's. Smyth is sparing of dates,

but it is likely he passed through the Floridas about 1774, coming from the west down the Ohio to New Orleans. He went north from St. Augustine by land to Virginia, taking much the same road as that followed south to Charleston by Dr. Schoepf. Castiglioni, early in 1786, passed from Richmond, Virginia, to Augusta, Georgia, from New-Berne to Charleston over Schoepf's route by 'Mr. Vareen's' and 'Lockwood's Folly.' Returning Castiglioni took the back road.

P. 265—*Voyage d'un Suisse dans différentes colonies d'Amérique pendant la dernière guerre.* Neuchatel, 1785, p. 95.

P. 275—The medicinal virtues of the 'wood Guaiaco' have been long known indeed. See, Baer's Catalogue no. 600 (Frankfurt a. M.), item 20—"*Ein clarer bericht wie man alte schaden, löcher und Bülen heylen soll mit dem holtz Guaiaco* &c. c. 1520, small 4to, 6 leaves. Woodcut on title."

P. 314—Bernard Romans [1720-1784]:

1] *Concise Natural History of East & West Florida.* New York, 1775.

2] *The Compleat Pilot for the Gulf Passage.* 1779. ['Identical with appendix to the Natural History of the Floridas.']

P. 322—There is a file of the *Phil. Gemeinnuz. Correspondenz* in the library of the Historical Society of Pennsylvania. However, nos. 310 and 311 are missing.

Citations

American Husbandry:

Containing an Account of the Soil, Climate, Production, and Agriculture of the British Colonies in North America and the West-Indies. With observations on the advantages and disadvantages of settling in them, conpared with Great Britain and Ireland. By an American. In two volumes. London. Printed for J. Bew in Pater-noster Row, 1775. [This work is not cited by Dr. Schoepf, who doubtless used the same materials, here and there, as the author. This is an extraordinary book, a soil survey for America at the beginning of the Revolution. The guess is hazarded that it was from the hand of Cluny, the author of the famous *American Traveller.*]

Browne, Patrick, 1720-1790:

Civil and Natural History of Jamaica, 1756. He left in MS 'A Catalogue of the Plants now growing in the Sugar Islands.'

Catesby, Mark, F. R. S.:

The Natural History of Carolina, Florida, and the Bahama Islands &c &c. Two volumes folio. London, 1731 and 1743 (Vol. II). [Catesby spent seven years in Virginia, from 1712 to 1719, "having relations there." His work was the most sumptuous of the books on natural history produced during the first half of the eighteenth century; the Latin names were supplied by Dr. Sherrard. Catesby's Figures (Vol. I, Birds; Vol. II, Fishes, Serpents &c) were repro-

duced at Nürnberg in 1750 by Eisenberger and Lichtensteger. From 1749 to 1753 Johann Michael Seligmann brought out, at Nürnberg, *Sammlung verschiedener und seltener Vögel &c,* the legend of the frontispiece being " Catesby und Edwards, Sammlung seltener Vögel "; the translation was by Dr. Georg Leonhard Huth. The work is based very largely on Catesby, but many of the plates are signed by Edwards, who had learned of Catesby. This was George Edwards [1694-1773], whose *History of Birds* was publishing from 1743 to 1764].

Chalmers, Dr. Lionel:

Weather & Diseases of South Carolina. London, 1776. 'His most respectable and useful work,' an Essay on Fevers. Charleston, 1767.

Gronovius: *Flora Virginica.* Leyden, 1762:

[From the Preface it appears that John Frederick Gronovius, from descriptions and specimens sent him by Dr. Clayton, had issued at Leyden a *Flora Virginica* in two parts, 1739 and 1743. From additional specimens and descriptions supplied by Clayton, and from other material, the elder Gronovius at the time of his death was preparing a third *Flora,* possibly incorporating the earlier material. The son, Laurentius Gronovius completed this manuscript and published it in 1762, the edition usually cited. His list of authorities includes Banister, John Bartram, Colden, Collinson, Dudley, and John Mitchell (Johannis Mitchell nova genera plantarum virginiensium exstant in act. phys. med. acad. caes. Leopold. Vol. 8). An outline map of Virginia, also furnished by Clayton, is given with the text, the counties indicated by num-

ber. Clayton was for some fifty years Clerk of the Court of Gloucester county. Dr. Clayton died in 1773. "He left behind him two volumes of manuscript, prepared for the press, and a *hortus siccus* of folio size with marginal notes and directions for the engraver. As a practical botanist, Clayton was perhaps inferior to no botanist of his time. His descriptions of plants are in general so correct that it is scarcely possible to remain in doubt concerning the precise species which he described. This is especially the case in the latter numbers which he transmitted to Gronovius." Jonathan Stokes, M. D., in Rees's Encyclopaedia. Clayton's manuscripts were burned in the fire which destroyed the Court House of New Kent county during the Revolution. The records have become so dim that he is not mentioned in Johnston's *Old Virginia Clerks.*]

Isert, P. E.:

Reisen nach Guine und den caribäischen Inseln. Berlin, 1788.

v. Jacquin, Nicolas Joseph:

1] *Index Plantarum.* Vienna, 1785. Jacquin was Professor of Botany at Vienna, and was "early distinguished by the publication of his history of American plants" (Sir J. E. Smith in Rees's Encyclopaedia).

2] *Selectarum Stirpium Americanarum Historia,* material from the West Indies.

Miller, Philip, 'Hortulanorum princeps,' 1691-1771:

1] *The Gardener's Dictionary.* London, 8th ed., 1768.

2] *Figures of the most beautiful, useful, and uncommon Plants described in the Gardener's Dictionary.* London, 1755-60.

Plukenet, Leonard, 1642-1706:

Phytographia, sive Stirpium illustriorum & minus cognitarum Icones, tabulis aeneis &c. London, c. 1691.

Rozier:

Sammlung brauchbarer Alhandlungen aus Roziers Beobacht. über Natur und Kunst. Leipzig, 1775-76.

v. Schmidel, Kasimir Cristoph [1718-1792]:

1] *Icones plantarum.* Nürnberg, 1782.

2] *Dissertationes botanici argumenti revisae.* Erlangen, 1784.

Seligmann, J. M.:

Sammlung verschiedener und seltener Vögel &c Nürnberg, 1749 (adaptation of Edwards and Catesby).

Sloane, Sir Hans:

Voyage to the Islands of Madera, Barbadoes, Nieves, St. Christopher's, and Jamaica, with the Natural History of the last. London, 1707-1725.

Sonnerat:

1] *Reise nach Neu-Guine.* Leipzig, 1777 [from the English].

2] *Reise nach Ostindien und China.* Leipzig, 1783 [from the French].

Trew: Ehret:

Plantae Selectae quarum imagines ad exemplaria naturalia Londini in hortis curiosorum nutrita manu artificiosa doctaque pinxit Georgius Dionysius Ehret . . . . Nominibus propriis notisque illustravit. D. Christophorus Jacobus Trew. Nürnberg, 1750-1773.

Index

Abaco, 258, 259
Albemarle Sound, 117, 119
Alligator Swamp, 126
Amber, 297
American scholarship, 211 ff
Ananas (Pineapples), 271
Anastasia Island, 248
Andel (Antill), Mr., 184
Andros Island, 292, 314
Ant-hills, 298
Assizers, 10

Bahama-gout, 295
Ballast-bricks, 192
Banjah, 261
Barracuda-fish, 277
Bars, 227
Bartram, 188, 238
Batchelor's Tax, 202
Bathtown, 126
Bermuda Hundred, 71
Bermuda Islands, 317
Bird's-nest pine, 174
Blackbeard, 264
Black cattle, 109 ff
Blagden, Dr., 255
Blandford, 72
Bolton's Ferry, 163
Botetourt, Lord, 78
Brasiletto, 274
Brunswick, 145
Bryan, Captain, 317
Burke, Aedanus, 204, 210
Buzzards, 104, 195

Cabbage-trees, 194, 241, 243
Campbellton, 154
Car, Michael, 21
Caracca, Don, 316
Catawbas, 196
Catesby, Mark, 274, 276
Cat Island, 314
Cattle, 246
Caves, 288
Charleston, 164 ff
Charleston market, 189
Cherokees, 196
Chiggers, 304
China-bark, 217
Church disestablishment, 63
Cincinnati Society, 208 ff
Coffee, 268
Columbia, 222
Columbus, 314
Coral-seas, 286
Cotton, 74, 75, 269
Cornwallis, Lord, 87, 113
Coventry-forge, 6
Cowdriver, 197, 240
Crackers, 223

Debating-society, 216
Devaux, Major, 316
Dismal Swamp, 99
Divers, 285
Drum-fish, 244
Duckenfield, 126
Dunmore, Lord, 263

Edenton, 111
Egg Island, 259
Ephrata, 15 ff

Falmouth, 42
Fishes, poisonous, 190
Fisher's Island (Anastasia), 231, 247
Flamingoes, 291
Florida Indians, 239
Formicola's Tavern, 64
Fort Johnson, 145
Fort Matanza, 262
Franklin, Benjamin, 115
Fredericksburg, 42
Fredericktown, 25
Free-negroes, 150

Gambee, 261
Georgetown, 163
Greek colonists, 234 ff
Guaiaca wood, 275
Guanas, 292
Gulf-mill, 2
Gulf-stream, 272 ff

Hamilton, Mr., 11
Hand-mills, 116
Hanover Court-house, 46
Hanovertown, 47
Hatteras, 317
Henry, Patrick, 56
Henry, William, 13, 14
Hillsborough, 129
Hog Island, 260, 262, 301
Honey Comb'd rocks, 266
Hunter's Iron-works, 42
Hutson, Mr., 204

Illinois, 70
Indigo, 157 ff, 238, 269
Inland passage, 225
Isle of Wight Court-house, 90

James Island, 193
James River, 50
Jamestown, 87
Jefferson, Thomas, 62
Jones' Mine-holes, 7
Jones' Tavern, 8

Kentucky, 5
Keys, 259

Lancaster, 10 ff
Lawson, General, 56
Leesburg, 30
Leeward storms, 170
Lime-burning, 2
Limes, 270
Lizards, 303
Loblolly pine, 174
Lobsters, 293
Lockwood's Folly, 153.
Long Bay, 161

M'Callisterstown, 22
Maclurg, Dr., 80
Mahogany, 273
Manchester, 66
Marmot, 289
Mastick-tree, 299
Matanza, 236
Maxwell, Colonel, 263
Meyer, Mr., 190
Midlothian mine, 67
Mills, George, 70
Minerals (Virginia), 67 ff

Minorcans, 230, 233 ff
Montresor, 79
Moravian settlements, 154
Mühlenberg, Heinrich, 12
Musa, 236

Nassau, 262
'Nation of Virginia,' 91 ff
Negroes, 147, 148
New-Bern, 128
New Englanders, 125
New Holland, 9
New Smyrna, 234
Norfolk, 98
North Beach, 246
Nüssmann, Pastor Adolph, 155

Oaks, 176 ff
Oglethorpe, General, 231, 232
Oranges, 270
Osborn's [Warehouse], 71
Oysters, 247

Palatines, 155
Palms, 308
Pamunky river, 46
Paper-money, 129 ff
Pensacola, 240
Peterlittle'stown, 22
Petersburg, 72
Pidgeon-plums, 309
Pitch, 142
Pitch pine, 143, 173
Pokahunta, 90
Pork-making 110
Portsmouth, 98
Pott, Mr., 6
Providence, 248

Racoon, 289
Rambo, Mr., 3
Refugiés, 226, 228, 231, 240, 259
Rice, 182, 238
Richmond, 49 ff
Roanoke river, 119, 120
Rodney, Lord, 278
Rogers, Woodes, 316
Romans, Bernard, 314
Rose Island, 299
Rosemary pine, 144
Rubsaamen, Jacob, 67
Rum [and mixtures], 220
Rush, Dr. Benjamin, 218

Saffrons, 309
Salisbury, 154
Salt-making, 139
Salt trade, 97
Salzburgers, 155
Sand-box, 308
Sayle, William, 164, 315
Schuylkill Bridge, 1
Schwediauer, Mr., 297
Sharks, 278
Shell-banks, 82 ff, 146
Slavery, 149, 220
Smithfield, 90
Smoothbarked pine, 175
Snead's Ferry, 134, 135
South Carolina Assembly, 197 ff
Squibb, Mr., 180
Squills, 276
St. Augustin, 229 ff
St. John's 226, 236
St. Marc de Apalache, 236
St. Simon's, 232
Start Point, 319
Staunton, 69

Strong drinks, 218
Suffolk, 96
Sugar-cane, 268
Sullivan's Island, 193
Surry Court-house, 90
Surveyor's compasses, 27
Swash, The, 226
Swedes-ford, 2

Taneytown (Tonny-town), 25
Taverns, 35
Tar, 141
Tarred streets, 97
Tea, 113, 114
Tea-shrub, 77
Thames, 319
Thorpe, Mr., 185
Tobacco, 73, 74, 90
Tonyn, Governor, 235, 240
Torch wood, 299
Tryon, Governor, 128
Turbot, 278
Turk's Island, 97, 302
Turnbull, Dr., 233, 235
Turpentine, 140 ff
Turtles, 279 ff
Turtle-crawls, 281
Turk's Island, 97, 302.

Valley Forge, 4
Vanhorsh, Mr., 204
Vareen, Mr., 156, 160
Virginia Assembly, 55, 56
Virginia horses, 65
Viticulture, 183 ff

War-spirit, 206, 207
Warwick, 71
Warwick Mine-holes, 7
Washington (No. Carolina), 124
West Florida, 237
Westham, 50
Western Virginia, 53, 54
Whigs and Tories, 204
Whitefield, Mr., 93
Whipple, Commodore, 165
William and Mary College, 79
Williamsburg, 78
Wilmington, 145
Wind-carriage, 14
Winguah Bay, 162
Wright's Ferry, 11, 19
Wracking, 272, 282 ff
Wrecks, 249

Yates, Dr., 251
Yams, 269
Yellow pine, 144
York (Pennsylvania), 20
York (Virginia), 81, 85

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